



# Preliminary Assessment

GAF Foot of S. Wood Avenue Linden/Union County New Jersey



GAF
Foot of S. Wood Ave/Linden
Union County/New Jersey

26

GAF/Linden is the site of a chemical manufacturing facility that has been in operation under various owners since the early 1900's.

An abandoned, uncapped chemical landfill covers approximately twelve acres of the property, with severe soil and groundwater contamination evident.

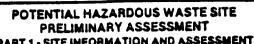
In December 1984, AWARE Incorporated began remedial action at GAF. A NJPDES permit came into effect on 6 February, 1986. Due to the volume and nature of contaminants, the site is given a high priority for inspection.

Submitted by:

David VanEck HSMS IV NJDEP/HSMA MSCA Project

Hours: 35





L IDENTIFICATION

O) STATE OZ SITE NUMBER

NJD 002185973

PART	1 - SITE INFORMA	TION AP	D ASSESSM	ENT	002103973	
II. SITE NAME AND LOCATION		102 2788	T ROUTE NO. CO	SPECIFIC LOCATION IDENTIFIES		
		Foot of S. Wood Avenue				
GAF Corporation		OF STATE OF ZIP COOR   OF COUNTY   OF COUNTY OF				
्रे दार Linden	. 1	NJ	07036	Union	CODE DIST	
	12' 50"	В	lock: 587	7 Lot: 1		
From Trenton: Rt. 1 north pacerossing over the Turnpike in	ast Linden A nto Tremley	irpor Point	t. Turn Rd. Tu	right on South rn left on road	Wood Ave., to Grasselli.	
III. RESPONSIBLE PARTIES						
01 OWNER if allowly		L	T (Marries, marry).			
GAF Corporation		1	Alps Rd			
03 CITY		1	05 21P COOE		\a_1	
Wayne		NJ	07470	201 ) 628-350	J4	
07 OPERATOR (If Mason the entering reas during)		OS STRE	T shromes, many	Augusta 5		
09 CITY		10 STAT	111 ZIP CODE	12 TELEPHONE NUMBER		
		1	<u> </u>	( )		
I F. OTHER	B UNCONTROL	LED WAS	TE SITE (CERCLA I		DAY YEAR	
10.8.85	Cream of that apply!  A. EPA D B. EF E. LOCAL HEALTH OF	PA CONTR FICIAL		ZE C. STATE D. OTH	HER CONTRACTOR	
co	NTRACTOR NAME(S):					
02 SITE STATUS (Cross are)  XI. A. ACTIVE D. B. INACTIVE D. C. UNKNOWN	03 YEARS OF OPE	RATION	1.00	MG YEAR	OWN	
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNO	WN, OR ALLEGED		<del></del>			
Mercury, Dichlorobenzene, Ph Propylene Oxide, Dinitrochlo	nenol, Tolue	ne, E ethan	thylene o	dichloride, Silv ne, Arsenic, Asb	er, Dioxane esos	
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT	AND/OR POPULATION					
Soil, groundwaterand possib with materials at the landf	ly surface w ill site cou	ater 1d po	contamina se a heal	ation exists. D lth hazard.	irect contact	
V. PRIORITY ASSESSMENT						
O1 PRIORITY FOR INSPECTION (Chock one. If night of medium is check  TS. A. HIGH (INDOCESS required prematity)  [PRACESSOR required prematity)	. C.LOW		Peri 3 - Description of D. NO acrit) (No		deposition forms	
VI. INFORMATION AVAILABLE FROM						
D1 CONTACT	02 OF (Agent)/Orga				03 TELEPHONE NUMBER	
Armando Arcenal	NJDEP/D	)WR/Me	tro Offi	ce	(201) 669-3900	
04 PERSON RESPONSIBLE FOR ASSESSMENT	08 AGENCY	06 0	IGANIZATION	07 TELEPHONE NUMB	1	
David VanEck .	NJDEP '	DW	M/HSMA	609 984-32	224 20 186 MONTH DAY YEAR	

EPA FORM 2070-12 (7-81)





## POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

I. IDENTIFICATION OI STATE OF SITE NUMBER

WASTE STATES, QUANTITIES, AND CHARACTERISTICS  TOYSCAL STATES COMMITTEE AND CHARACTERISTICS  TOYSCAL STATES  TOYSCAL STATES  TO BURNING CHARACTERISTICS  TOYSCAL STATES  TO BURNING CHARACTERISTICS  TOYSCAL STATES  TOYSCAL S	<b>WILL</b>	· · · · · · · · · · · · · · · · · · ·	<u> </u>	PART 2 - WASTE	INPURMATION			
WASTETYPE   SOLUTION   DESCRIPTION   DESCR	. WASTE ST	ATES, QUANTITIES, AN	D CHARACTER	ISTICS		BIRTICS (Cause of the cause		
L WASTETYPE  CATEGORY  SUBSTANCE MAME  OI GROSS AMOUNT TO WASDURET DO COMMANTS  SLU SLUDGE  OLW CAT WASTE  UNKNOWN  SOL SOLVENTS  PED PESTICIDES  OCC OTHER ORGANIC CHEMICALS  OIC WORGANIC CHEMICALS  WINKNOWN  OCC WORGANIC CHEMICALS  WINKNOWN  WES HEAVY MITALS  OZ SUBSTANCES THE AMOUNT WITH THE AMOUNT OF STORAGE GISPORAL METHOD  OZ BUSSTANCES THE AMOUNT WITH THE AMOUNT OF STORAGE GISPORAL METHOD  OZ BUSSTANCES THE AMOUNT WITH THE AMOUNT OF STORAGE GISPORAL METHOD  OZ BUSSTANCES THE AMOUNT WITH THE AMOUNT OF STORAGE GISPORAL METHOD  OZ BUSSTANCES THE AMOUNT WITH THE AMOUNT OF STORAGE GISPORAL METHOD  OZ BUSSTANCES THE AMOUNT WITH THE AMOUNT OF STORAGE GISPORAL METHOD  OZ BUSSTANCES THE AMOUNT WITH THE AMOUNT OF STORAGE GISPORAL METHOD  OZ BUSSTANCES THE AMOUNT WITH THE AMOUNT OF STORAGE GISPORAL METHOD  OZ BUSSTANCES THE AMOUNT WITH THE AMOUNT OF STORAGE GISPORAL METHOD  OZ BUSSTANCES THE AMOUNT WITH THE AMOUNT OF STORAGE GISPORAL METHOD  OZ BUSSTANCES THE AMOUNT OF STORAGE GISPORAL METHOD  OZ COMMANDER  MES METCUTY  7439976  IN WATET  180  PPD  UNKNOWN  OICH THE ORD THE AMOUNT OF STORAGE GISPORAL METHOD  OX COMMANDER  OICH THE ORD THE AMOUNT OF STORAGE GISPORAL METHOD  OX COMMANDER  OICH THE ORD THE AMOUNT OF STORAGE GISPORAL METHOD  OX COMMANDER  OICH THE ORD THE AMOUNT OF STORAGE GISPORAL METHOD  OX COMMANDER  OICH THE ORD THE	UÉA SOUD	LE ELURRY	(Measured Music in	of the state of th	E A. TOXIC M B. CORROS LI C. RADIOAN	LI E. SOLUBLINE LI F. INFECTI CTIVE LI G. FLAMMA	E U I HIGHLY VO OUS U J. EXPLOSIV ABLE U K. REACTIVI ILE U L. INCOMPA	E I ITOLE
LWASTETYPE  CATEGORY SUBSTANCE NAME 01 OROGS AMOUNT 02 LWT OF MEASURE 03 COMMENTS  SLU SLUDGE UNKNOWN 01 Floating on top of the water table 1500. SOLVENTS UNKNOWN 10 IN JUNE 15			1		AL D PENDO.		⊔ M. NOT APP	UCABLE
SUL SUDGE UNKNOWN SULDGE UNKNOWN OUL WASTE SOL SOLVENTS UNKNOWN OCC OTHER ORGANIC CHEMICALS OCC OTHER	WASTET	, <del>) </del>						
SLU SLUGE UNKNOWN OLY WASTE UNKNOWN OSC WASTE UNKNOWN PSO PESTICIDES UNKNOWN IN CHEMPOLES UNKNOWN SOC OTHER ORGANIC CHEMICALS UNKNOWN ACD ACIDS BAS BASES MES HEAVY METALS 2,5 million pounds Hg discharged into Arthur Kill VALAZAROOUS SUBSTANCES (Sto. American were also accounts) VALAZAROOUS SUBSTANCES (Sto. American were accounts) VALAZAROOUS (SUBSTANCES (Sto. American were accounts) VALAZAROOUS (STO. Am			IAME	DI GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMAENTS		
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SOL SOLVENTS UNKNOWN IN drums  PSO PESTICUES OCC OTHER ORGANIC CHEMICALS UNKNOWN  NORGANIC CHEMICALS UNKNOWN  ACD ACIDS  BAS BASES  MES HEAVY METALS 2.5 million pounds Hg discharged into Arthur Kill  V. HAZARDOUS SUBSTANCES (Assument or other statement)  OCC Phenol 108952 in water 180 ppm  COC Phenol 108883 Unknown  SOL toluene 108883 Unknown  SOL dichlorobenzene 999 Unknown  SOL ethylene dichloride 107062  MES silver 7440224 Unknown  SOL propylene oxide 75569 Unknown  SOL propylene oxide 75569 Unknown  SOL dinitrochlorobenzol 999 Unknown  COC nonane 111842 Unknown  MES arsenic 7440382 in water 0.2 ppm  MES arsenic 7440382 in water 0.2 ppm  OCC nonane 111842 Unknown  OCC nonane 111842 Unknown  OCC nother areas and the state of the state	OLW	OILY WASTE		unknown	oil floati	ng on top o	f the water	table
OCC   OTHER ORGANIC CHEMICALS   UNKNOWN   NORGANIC CHEMICALS   UNKNOWN   U	SOL.	SOLVENTS			in drums			
NORGANGC CHEMICALS	PSO	PESTICIDES						
MACD	occ	OTHER ORGANIC C	HEMICALS	unknown				
BAS   BASES   MES   MEAVY METALS   2.5   million   pounds Hg   discharged   into Arthur Kill	юс	INORGANIC CHEMIC	CALS	unknown				
MES NEAVY METALS 2.5 million pounds Hg discharged into Arthur Kill  V. HAZARDOUS SUBSTANCES (AS ASSESSED AS ASSESS	ACD	ACIOS			<u> </u>			
NATAROOUS SUBSTANCES   100 ARROWS   100 AR	BAS			_		diachanged	into Authur	V:11
NATEGORY   DO SUBSTANCE NAME   DO CAS NUMBER   DO STORAGE CRESPOSAL METHOD   DO SCONCENTRATION   CASCENTRATION   CASCENTRATI					<u>lpounds</u> Hg	Tarscharged	THEO ALCHUL	NIII.
MES   mercury   7439976   unknown	V. HAZARDI	OUS SUBSTANCES	Appendus for Model Hoder		1	PAGE ALETHOD	OS CONCENTRATION	DE MEASURE OF
MES	1 CATEGORY	02 SUBSTANCE	NAME		04 STORAGE US	POSAL METROD		CONCENTRATION
SOI	MES							2 2 2
SOI. dichlorobenzene 999 unknown  SOI. ethylene dichloride 107062 unknown  MES silver 7440224 unknown  SOI dioxane 123911 unknown  SOI propylene oxide 75569 unknown  OCC dinitrochlorobenzol 999 unknown  SOI Methanol 67561 unknown  OCC nonane 111842 unknown  MFS arsenic 7440382 in water 0.2 ppm  IOC ashestos 1332214 unknown  IOC cyanide 999 unknown  OCC napthalene 91203 unknown  OCC chlorinated hydrocarbons 999 in water 291 ppm  V.FEEDSTOCKS INDIA ARCHIO INC. CATEGORY OI FEEDSTOCK NAME 02 CAS NUMBER FDS  FDS FDS FDS FDS FDS	000	phenol			in water			l bbm
SOL dithoropenzelle SOL ethylene dichloride 107062 unknown MES silver 7440224 unknown SOL dioxane 123911 unknown SOL propylene oxide 75569 unknown OCC dinitrochlorobenzol 999 unknown SOL Methanol 67561 unknown OCC nonane 111842 unknown MFS arsenic 7440382 in water 0.2 ppm IOC ashestos 1332214 unknown IOC cyanide 999 unknown OCC napthalene 91203 unknown OCC chlorinated hydrocarbons 999 in water 291 ppm V-FEEDSTOCKS INFORMATION OF FEEDSTOCK NAME OZ CAS NUMBER FDS FDS FDS FDS FDS FDS FDS	SOL							
MES silver 7440224 unknown  SOI dioxane 123911 unknown  SOL propylene oxide 75569 unknown  OCC dinitrochlorobenzol 999 unknown  SOI Methanol 67561 unknown  OCC nonane 111842 unknown  MFS arsenic 7440382 in water 0.2 ppm  IOC asbestos 1332214 unknown  IOC cyanide 999 unknown  OCC napthalene 91203 unknown  OCC chlorinated hydrocarbons 999 in water 291 ppm  V. FEEDSTOCKS TOO ADDRESS WE CAS MUMBER CATEGORY OI FEEDSTOCK NAME 02 CAS NUMB  FDS FDS FDS FDS  FDS FDS FDS  FDS FDS FDS	S01_				<del> </del>			<del> </del>
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SOL propylene oxide 75569 unknown OCC dinitrochlorobenzol 999 unknown SOL Methanol 67561 unknown OCC nonane 111842 unknown MFS arsenic 7440382 in water 0.2 ppm IOC ashestos 332214 unknown IOC cyanide 999 unknown OCC napthalene 91203 unknown OCC chlorinated hydrocarbons 999 in water 291 ppm V. FEEDSTOCKS (DOC ASSESSED)  V. FEEDSTOCKS (DOC ASSESSED)  FDS	MES	silver			<u> </u>		<del></del>	-
OCC dinitrochlorobenzol 999 unknown  SOI Methanol 67561  OCC nonane 111842 unknown  MFS arsenic 7440382 in water 0.2 ppm  IOC ashestos 1332214 unknown  IOC cyanide 999 unknown  OCC napthalene 91203 unknown  OCC napthalene 91203 unknown  OCC chlorinated hydrocarbons 999 in water 291 ppm  V. FEEDSTOCKS (DED ADDRESS OF ADDRESS)  FOS FDS FDS  FDS  FDS  FDS  FDS  FDS  FDS	SOL	dioxane			<u> </u>			
SOI Methanol 67561 unknown  OCC nonane 111842 unknown  MFS arsenic 7440382 in water 0.2 ppm  IOC ashestos 1332214 unknown  IOC cyanide 999 unknown  OCC napthalene 91203 unknown  OCC chlorinated hydrocarbons 999 in water 291 ppm  V. FEEDSTOCKS (DATA ARROWN DEEDSTOCK NAME O2 CAS NUMBER FDS	SOL	propylene o	xide		<b></b>	<u></u>		+
Methano	000	dinitrochlo	robenzol		<u> </u>			<del> </del>
OCC         nonane         111842         Unknown           MES         arsenic         7440382         in water         0.2         ppm           IOC         ashestos         1332214         unknown         unknown           IOC         cyanide         999         unknown         unknown           OCC         napthalene         91203         unknown         unknown           OCC         chlorinated hydrocarbons 999         in water         291         ppm           V. FEEDSTOCKS (DO ADDICAL NAME)         02 CAS NUMBER         CATEGORY         01 FEEDSTOCK NAME         02 CAS NUMBER           FDS         FDS         FDS         FDS         FDS           FDS         FDS         FDS         FDS	SOI	Methanol						
MFS arsenic 7440382 in water 0.2 ppm  IOC ashestos 1332214 unknown  IOC cyanide 999 unknown  OCC napthalene 91203 unknown  OCC chlorinated hydrocarbons 999 in water 291 ppm  V.FEEDSTOCKS DECARDORY 01 FEEDSTOCK NAME 02 CAS NUMBER CATEGORY 01 FEEDSTOCK NAME 02 CAS NUMBER FDS  FDS FDS FDS FDS FDS  FDS FDS FDS FDS		nonane		111842				nnm
IOC ashestos 1332214 Unknown IOC cyanide 999 Unknown OCC napthalene 91203 Unknown OCC chlorinated hydrocarbons 999 in water 291 ppm V. FEEDSTOCKS (1000 ADDITION DE CAS MONTAGE) CATEGORY DI FEEDSTOCK NAME 02 CAS NUMBER CATEGORY O1 FEEDSTOCK NAME 02 CAS NUMBER FDS	MES	arsenic		7440382	<u>  in water</u>			DDIII
IOC cyanide 999 unknown OCC napthalene 91203 unknown OCC chlorinated hydrocarbons 999 in water 291 ppm V. FEEDSTOCKS (1000 ARROWN DE CAS MANUEL PROSECULAR DE CAS MANUEL PR								
OCC chlorinated hydrocarbons 999 in water 291 ppm  V. FEEDSTOCKS DECEMBER OF CATEGORY OF FEEDSTOCK NAME OF CAS NUMBER FDS		cvanide		999				
OCC chlorinated hydrocarbons 999 in water 291 ppm  V. FEEDSTOCKS (DATE OF A PARTY OF A P				91203				<del>-  </del>
V. FEEDSTOCKS (MANUSE MANUSE MANUSE MANUSER CATEGORY OFFEEDSTOCK NAME 02 CAS NUMBER FDS	000	1 .	d hydroca	rbons 999	<u>in water</u>		291	ppm
CATEGORY			•					T
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FDS	FDS				FD\$			
FDS         FDS           FDS         FDS	FDS				FDS			
FDS POS					FDS			ļ
VI. SOURCES OF INFORMATION (Can buscast refuserices, e.g., state land, samples enarysis, reports )	FDS				FOS			
	VI. SOURCE	ES OF INFORMATION	Can success references.	e y., siare inst. sandre analy:	AL IODORE I			

Attachments C,D and E - Site inspection reports and discussion of toxins present DWM: Central HSMA files, Solid Waste Engineering DWR: Central Files, Metro Files

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## POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

L IDENTIFICATION

ZARDOUS CONDITIONS AND INCIDENTS	02 8 OSSERVED (DATE: 2/(9/82_)	POTENTIAL	C: ALLEGED
N A GROUNDWATER CONTAMINATION	02 IS OSSERVED (DATE:		
POPULATION POTENTIALLY AFFECTED:	•		
Monitor wells on the site reve	al severe groundwater contan	nination.	
(See Attachments B-5, B-6, D-2	D-8, D-16)		İ
(See Accacimients p-3, p-0, p =			
CONTANUNATION	02 XOBSERVED IDATE 1/13/82-1	EI POTENTIAL	C ALLEGED
K B. SURFACE WATER CONTAMINATION POPULATION POTENTIALLY AFFECTED:	04 NARRATIVE DESCRIPTION		
31	s discharged into Arthur Ki	11. Runoff f	rom the
2.5 million lbs. of mercury wa site may carry a variety of co	ontaminants. (See Attachmen	ts C-4, C-5,	C-8, D-4,
D-8, D-16)			
OC CONTAMINATION OF AIR	02 C OBSERVED (DATE	OX POTENTIAL	C: ALLEGED
POPULATION POTENTIALLY AFFECTED:	04 NARRATIVE DESCRIPTION		
Landfill and open waste water	collection channels and pon	ds may releas	se con-
taminants in air. (See attacl	nments B-5, C-5, D-17)		
	02 C! OBSERVED (DATE:)	[] POTENTIAL	Ci ALLEGED
1 17 D FIRE/EXPLOSIVE CONDITIONS 3 POPULATION POTENTIALLY AFFECTED:	D4 NARRATIVE DESCRIPTION		•
3 POPULATION POTENTIALES			
•			•
		•	
	82 MSR4.80 W.74 Comment	1 POTE::TAL	ALLEGED
E 1850 00 (40°	04 NARRATIVE DESCRIPTION		
3 POPULATION POTENTIALLY AFFECTED			
	•		
•			
THE CONTAMINATION OF SOIL 12	02.5 OBSERVED (DATE: _2/6/85	D POTENTIAL	D ALLEGED
OF A COTENTIALLY AFFECTED:	04 NARRATIVE DESCRIPTION		
•			
Extensive soil contamination	is evident throughout the la	andfill. (Se	e Attachment
Extensive som contamination	13 CAIdello olli oddinama	•	
D C D 17\			
B-5, B-6, D-17)			
B-5, B-6, D-17)	02 C) ORSERVED (DATE:	) DOTENTIAL	
B-5, B-6, D-17)  11.G DRINKING WATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED.			
B-5, B-6, D-17)	02 C) ORSERVED (DATE:		
B-5, B-6, D-17)	02 C) ORSERVED (DATE:		
B-5, B-6, D-17)	02 C) ORSERVED (DATE:	POTENTIAL	D ALLEGED
B-5, B-6, D-17)  01 L/G DRINKING WATER CONTAMINATION D3 POPULATION POTENTIALLY AFFECTED.	02 [] OBSERVED (DATE:		D ALLEGED
B-5, B-6, D-17)  01 L/G DRINKING WATER CONTAMINATION  03 POPULATION POTENTIALLY AFFECTED.	02 C) ORSERVED (DATE:	POTENTIAL	D ALLEGED
B-5, B-6, D-17)  01 L/G DRINKING WATER CONTAMINATION D3 POPULATION POTENTIALLY AFFECTED.	02 [] OBSERVED (DATE:	POTENTIAL	D ALLEGED
B-5, B-6, D-17)  01 L/G DRINKING WATER CONTAMINATION  03 POPULATION POTENTIALLY AFFECTED.	02 [] OBSERVED (DATE:	POTENTIAL	D ALLEGED
B-5, B-6, D-17)  01 L/G DRINKING WATER CONTAMINATION  03 POPULATION POTENTIALLY AFFECTED.	02 [] OBSERVED (DATE:	POTENTIAL	D ALLEGED
B-5, B-6, D-17)  01 L/G DRINKING WATER CONTAMINATION  03 POPULATION POTENTIALLY AFFECTED.	02 (1) OBSERVED (DATE:	_) D POTENTIAL	D ALLEGED
B-5, B-6, D-17)  11. G DRINKING WATER CONTAMINATION D3 POPULATION POTENTIALLY AFFECTED.  11. H. WORKER EXPOSURE/INJURY 03. WORKERS POTENTIALLY AFFECTED:	02 [] OBSERVED (DATE: 04 NARRATIVE DESCRIPTION  02 [] OBSERVED (DATE: 04 NARRATIVE DESCRIPTION	POTENTIAL	D ALLEGED
B-5, B-6, D-17)  01 L.G. DRINKING WATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED.  01 L.H. WORKER EXPOSURE/INJURY 03 WORKERS POTENTIALLY AFFECTED:	02 (1) OBSERVED (DATE:	_) D POTENTIAL	D ALLEGED
B-5, B-6, D-17)  11. G DRINKING WATER CONTAMINATION D3 POPULATION POTENTIALLY AFFECTED.  11. H. WORKER EXPOSURE/INJURY 03. WORKERS POTENTIALLY AFFECTED:	02 [] OBSERVED (DATE: 04 NARRATIVE DESCRIPTION  02 [] OBSERVED (DATE: 04 NARRATIVE DESCRIPTION	_) D POTENTIAL	D ALLEGED

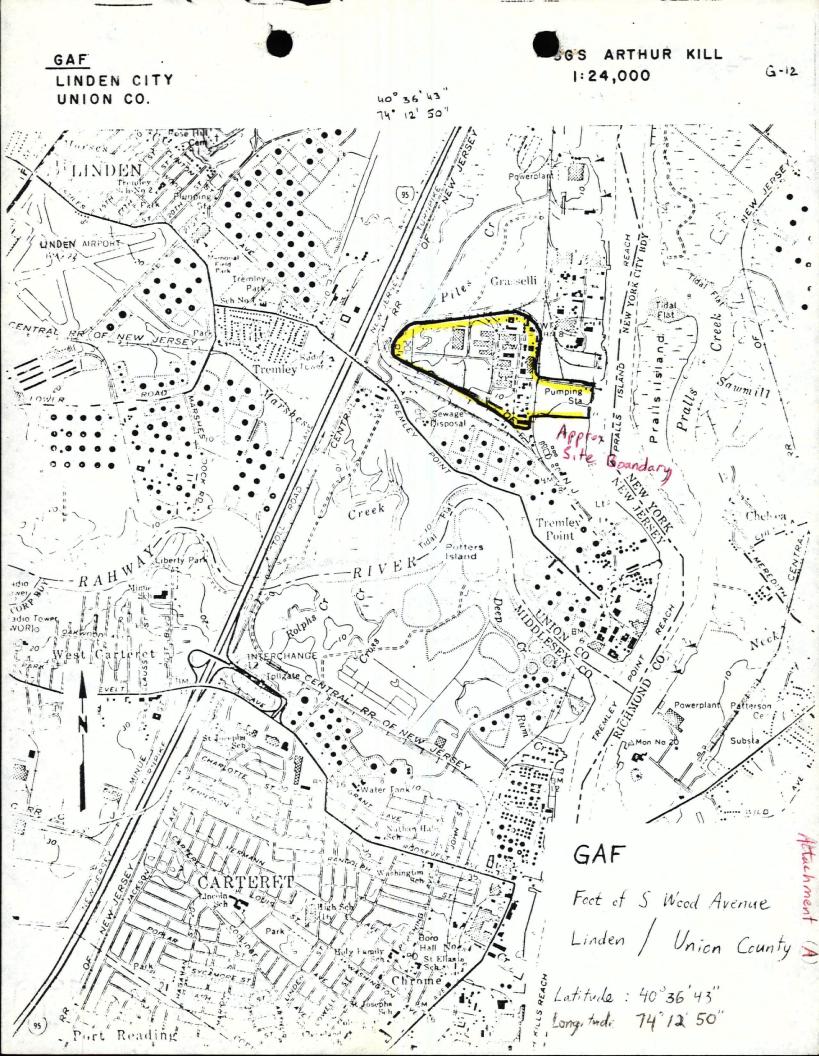
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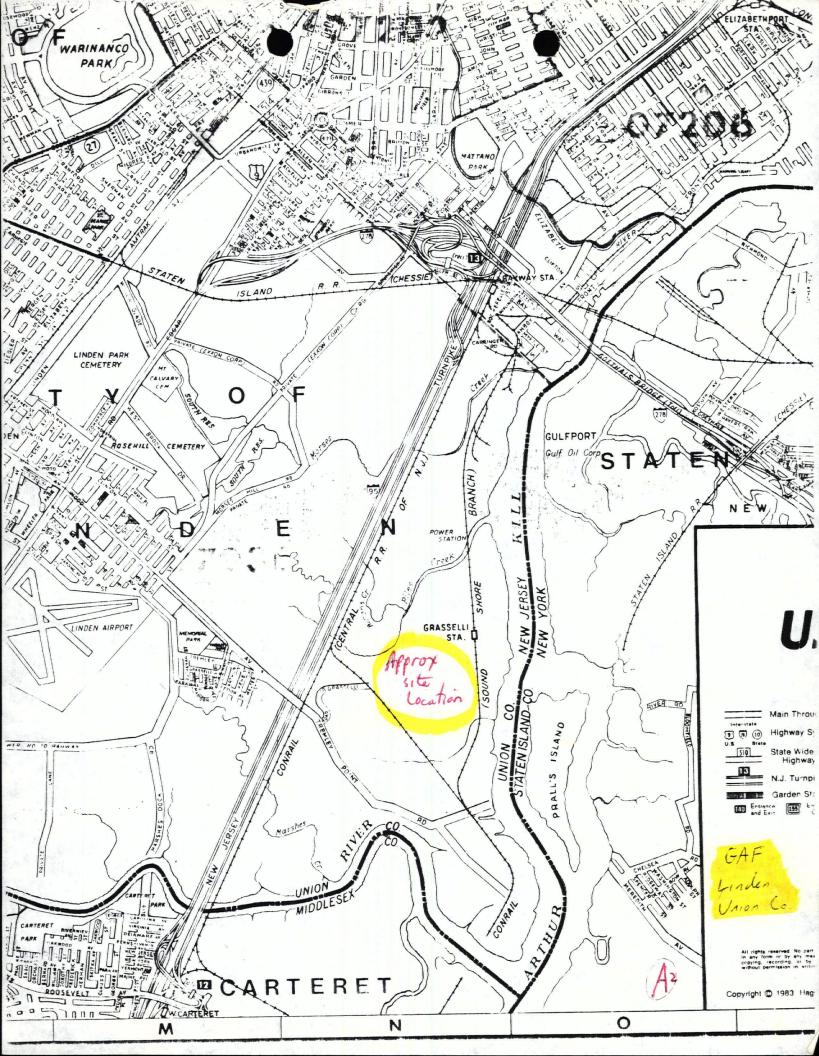
## POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

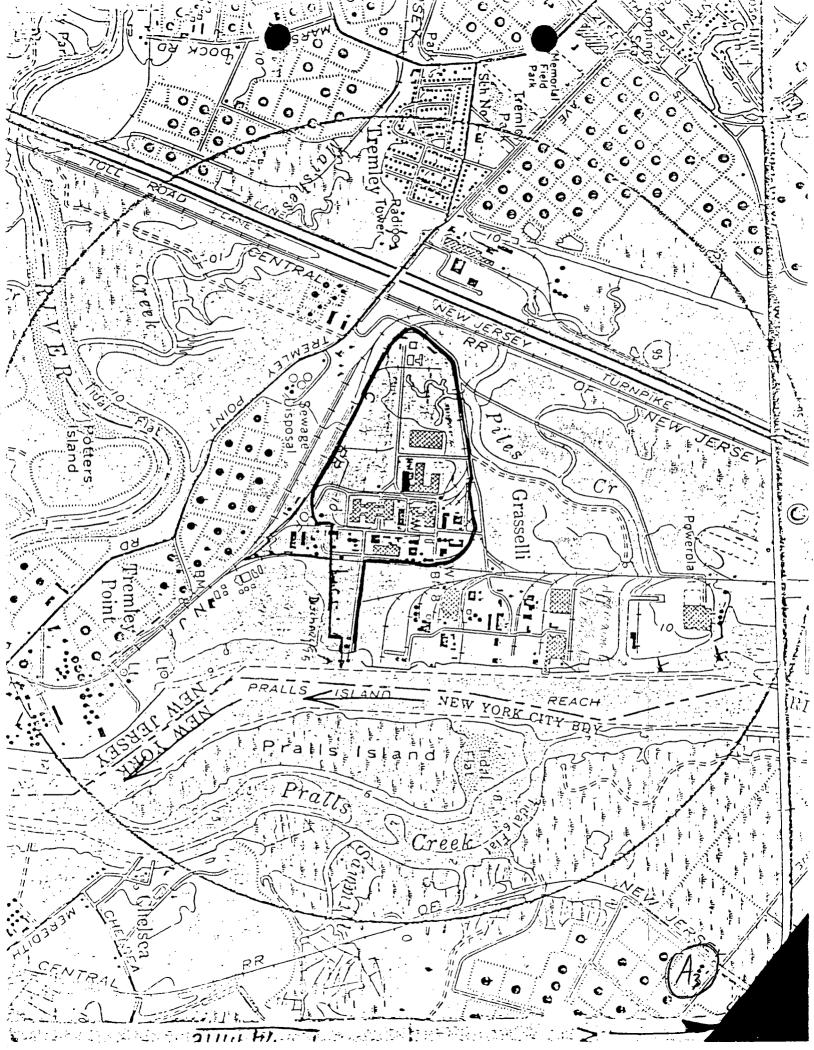
L IDENTIFICATION

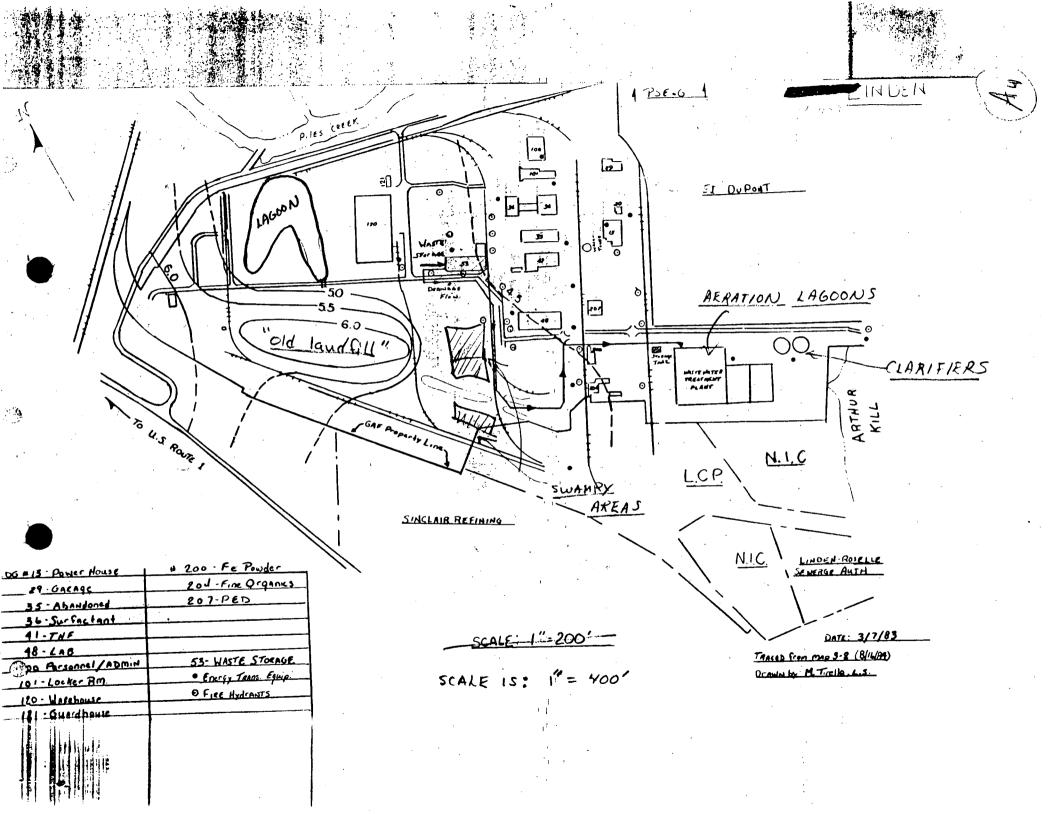
<b>WEPA</b>	PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS
	ONS AND INCIDENTS (Comme)
01 5 J. DAMAGE TO FLOR 04 NAFRATIVE DESCRIPTIO	
No vegetation grounds: (See	recovery on surface of old landfill and several areas of the plant Attachment D-17)
01 ECK DAMAGE TO FAUN 04 NARRATIVE DESCRIPTIO	O2 D OBSERVED (DATE) & POTENTIAL . C. ALLEGED
Mercury releas	
01 S L. CONTAMINATION C	
Od Martin Har Description	
	•
01 C M. UNSTABLE CONT.	AINMENT OF WASTES 02 - OBSERVED (DATE ) - POTENTIAL - ALLEGED
03 POPULATION POTENTIA	marks reducing distribution
	$\cdot$
	SITE PROPERTY DE DOSSERVED (DATE) DEPOTENTIAL D'ALLEGED
01 K N DAMAGE TO OFF	SILE PROPERTY
Liquid runoff	from site, as well as discharge into Arthur Kill, may have spread (See attachments C-8, D-4, D-16)
01 0 CONTAMINATION 04 NARRATIVE DESCRIPTION	NOF SEWERS, STORM DRAINS, WWTP8 02 () OBSERVED (DATE) C POTENTIAL () ALLEGED (ON
01 S.P. ILLEGALJUNAUTI	
Uncontrolled facility. (S	disposal of unknown wastes by GAF and previous owners of the see Attachment D-19)
05 DESCRIPTION OF ANY	OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
•	
III. TOTAL POPULATION IV. COMMENTS	POTENTIALLY AFFECTED:
	AURDE 1 horan of the city in December 1005. An NIDDEC normit
Kemedial acti	ion by AWARE Inc. began at the site in December 1985. An NJPDES permit fect February 6, 1986.
came into err	(See Attachment E).
V. SOURCES OF INFOR	RMATION (Gre specific reformaces, e.g., suite reco. semple analysis, reports)
Attachments B	R C D and F
Attachments E	DWM: Central HSMA files, Solid Waste Engineering DWR: Central Files, Metro Files

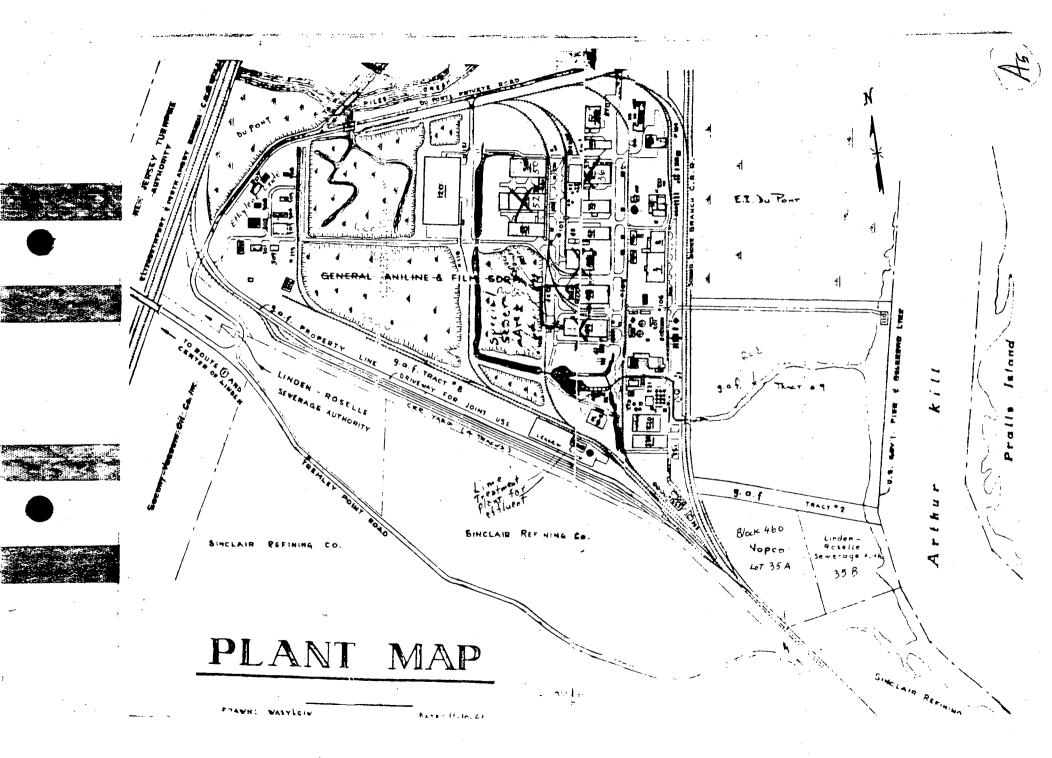
<b>SEPA</b>	POTENTI	AL HAZARDOU	S WASTE S	ITE IDENTI	FICATION	REGION	NJ 0000/	7150
activity or	r confirmation	on of a potential that an actual h EPA's Hazardou	ealth or en	vironmental	threat exists.	eted as a f All identi	finding of illegation will	al
a hazardoi	us waste prob	lem actually exi	sts.	e Emoiceme	nt and Kespon	se system	to determine i	1
A. SITE NAME  GAF COS	RP.			B. STREET (or	r'other identifier)			-
C. CITY	<u> </u>			D: STATE	E. ZIP CODE	F. COU	NTY NAME	
LINDEN G. OWNER/OPERATOR	· · · · · · · · · · · · · · · · · · ·		: ·	NJ			1011	
1. NAME	[if known)		-		-	2. TEL	EPHONE NUMBER	A
H. TYPE OF OWNERSHIP					· · · · · · · · · · · · · · · · · · ·			
	2. STATE	3. COUNTY	4. MUNI	CIPAL [	5. PRIVATE	[] 6. UNKN	OWN	
I. SITE DESCRIPTION				:			<del></del>	
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		•	:	to get the		•		!
J. HOW IDENTIFIED (i.e.		plaints, OSHA citatio	ons, etc.)	<del></del>			K. DATE IDENT	
S1	PATE LIST	. SPARI EM					5/8/8/	
C. SUMMARI OF FUILA	TIAL ON RHOW		•		•		.*	
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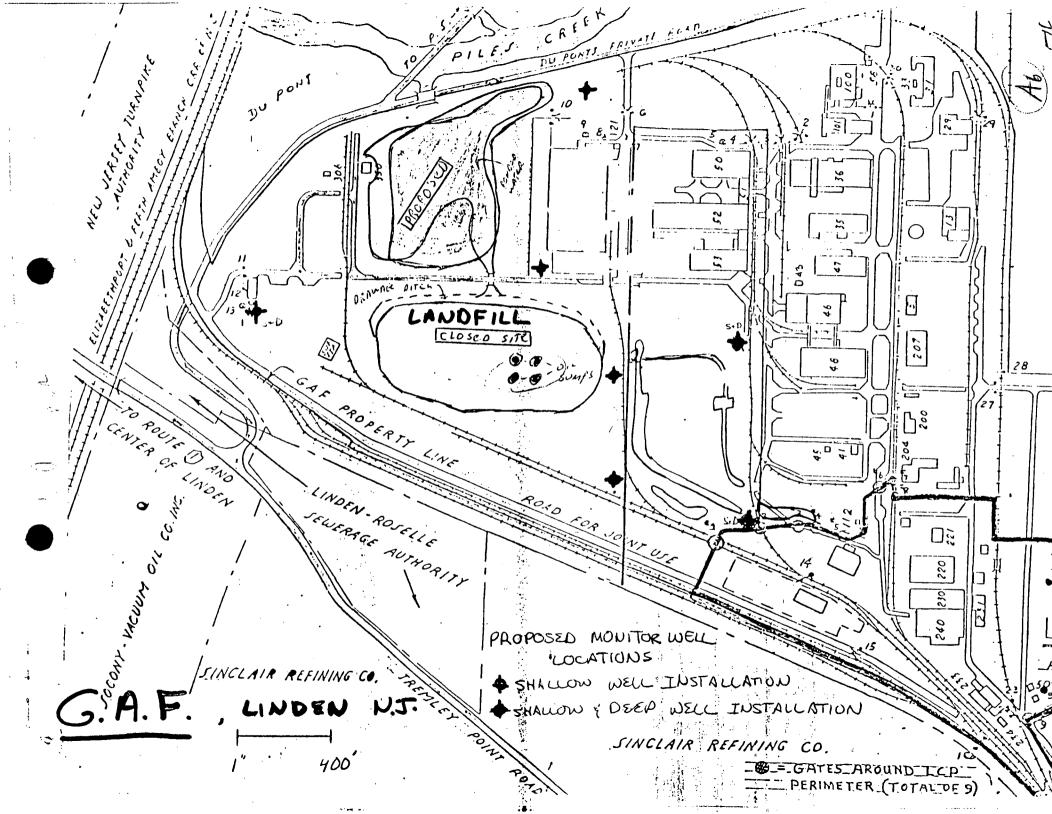


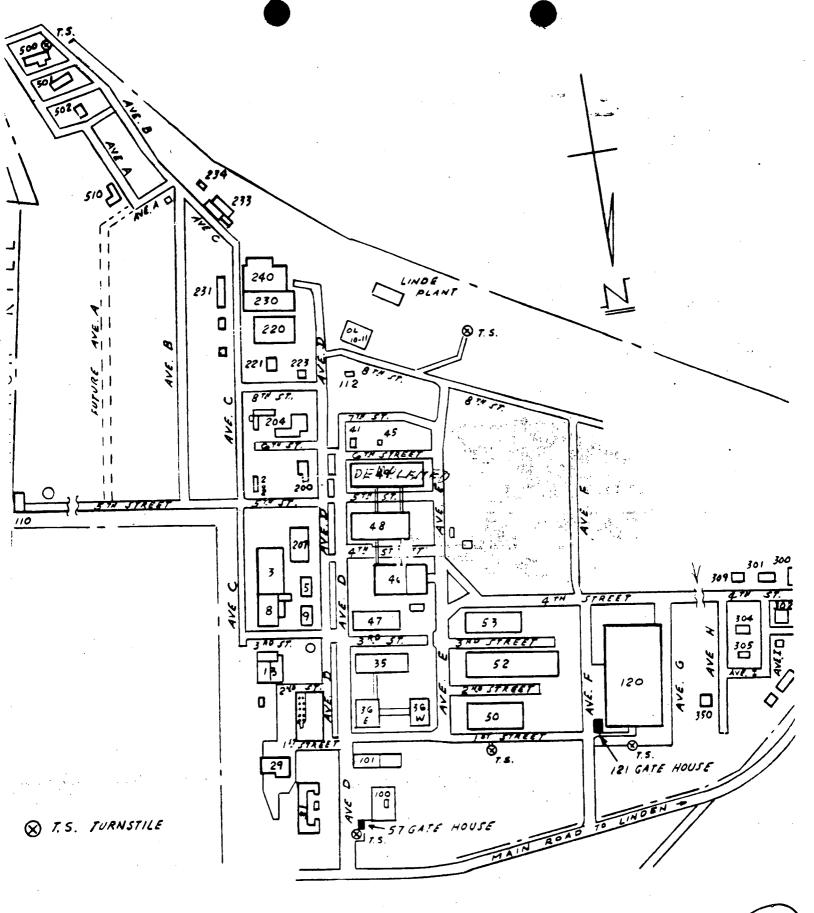












SCALE: 1= 400' DATE: 2-20-70 PLANT ROAD MAP

GAF LINDEN

(A1) A-5388

## SECTION 1

#### BACKGROUND

The GAF Corporation plant in Linden, New Jersey has been in operation under various owners and operators since the early 1900's. The plant has manufactured a wide range of products including dyestuffs, pigments and surfactants. The plant operates a secondary wastewater treatment plant, from which the effluent is discharged to the Arthur Kill. Process wastewaters, cooling water, and sanitary wastewaters comingle at the source and are conveyed to the wastewater treatment plant through a system of open ditches. Although currently very underloaded, wastewater treatment operations include coarse screening, oil skimming, equalization, preaeration and neutralization, aeration for biological treatment, clarification, and chlorination when necessary.

The facility was operated by the United States Justice Department from 1941 to 1966 as a war asset. An industrial waste landfill was operated on the site from 1955 to 1970; a permitted drum landfill was operated from 1970 to 1973. A wide range of wastes were deposited in the landfill during this period. To the best of GAF's knowledge, over this entire period, all landfills were permitted, developed and operated under then-current regulations and technology. Contamination of surficial fill has been evidenced in other areas of the plant site and is attributable to process leaks and spills, infiltration from the aforementioned wastewater ditches, and disposal of industrial wastes.

Attachment (B)

EPA ID # NJ002185973

## 7:26 - 12.1(e)

- 1. General Description GAF Corporation operates a chemical manufacturing facility in Linden, New Jersey. Products manufactured at this facility include surface active agents and specialty chemicals. Waste generated during the manufacture of these products are stored on-site prior to shipment off site to permitted and approved hazardous waste disposal facilities. All waste material is stored in designated areas and is managed in accordance with the RCRA regulations.
- Chemical and Physical Analysis Each waste stream is analyzed to determine its hazard and characteristics prior to storage and shipment off site. Waste profile sheets are completed for each waste stream.
- 3. Process Description Waste material which is generated in the production area is placed in specified containers. The containers are labelled and, once filled, sealed and sent to the waste storage area where it is placed in the proper area according to its hazard class. Material is then ready for shipment off site. Waste material is also collected from the wastewater influent and stored in a storage tank.
- 4. Waste Analysis Plan Attached.
- 5. Security Procedures The facility is completely surrounded by a fence to prevent and/or to control entry into the active portion of the plant. A 24 hour surveillance system is maintained at the facility. Danger signs are posted at the active portions of the facility. Records are kept as to the description and quantity of each waste which is placed in storage and the date of shipment off site for disposal. A record is also maintained as to the location of all waste materials. Results of waste analysis and inspections are also maintained.
- 6. <u>General Inspection Schedule</u> Each area is inspected daily and records of the inspection are kept on file. Areas are inspected for leaks, corrosion, spills, etc. Inspection logs are maintained (attached).
- 7. Preparedness and Prevention The facility is maintained and operated to minimize the possibility of fire, explosion or any unplanned sudden or non-sudden releases of hazardous waste to the environment. The facility is equipped with emergency equipment which is located throughout the area of the plant. This equipment includes fire extinguishers, fire control equipment and spill control equipment. A communication and alarm system is maintained throughout the facility. Adequate isle space is maintained in the hazardous waste storage area to facilitate the movement of fire control equipment, spill control equipment, etc. The facility has made an arrangement with the local fire officials for an inspection at least twice per year. The Linden facility is also a member of the Linden Industrial Mutual Aid Council (LIMAC). Specific instructions for responding to emergencies are included with the contingency plan submission.

## GAF CORPORATION - LINDEN STORAGE FACILITY CLOSURE

### EPA I.D. #NJD002185973

GAF Corporation - Linden maintains a building for the storage of hazardous waste on the Linden facility site. Drummed waste material is stored in the approximately 250' x 100' brick building. Recently it has been decided to no longer store waste material in this building. Therefore this building will be decontaminated and closed in accordance with the request by the N.J. Department of Environmental Protection (NJDEP). A new location has been designated for hazardous waste storage and is awaiting approval by the NJDEP. Upon completion of the closure activities, the closure will be certified by an independent, registered professional engineer.

## Closure Plan

- 1. All hazardous waste is being inspected to ensure proper identification, packaging and labelling. Unknown waste material is being sampled and analyzed for proper waste classification and packaged and labelled accordingly. Manifests will be prepared and all hazardous waste will be transported off-site to permitted and licensed hazardous waste disposal facilities. After removal of all waste material from the building, the floor drains will be capped, the doorways diked and the storage pad will be washed thoroughly to remove any contamination which may have resulted from hazardous waste storage.
- 2. Approximately 600 drums of waste material remain in the building awaiting disposal. Approximately 25% of these drums are classified as hazardous. The waste water generated during decontamination will be collected and analyzed to determine if hazardous constituents are present in the wastewater and transported off-site for wastewater treatment.
- 3. Wastewater generated from decontamination procedures will be analyzed for metals, ph, solids and toxic constituents.
- 4. After all the waste material is analyzed and the proper hazard class has been established for each waste, the waste will be consolidated, if possible, according to it's compatibility and class. The consolidation will reduce the quantity of drums being transported for disposal. Additionally, some waste material may be removed from drums and pumped into tank trucks for shipment.
- 5. The waste disposal contractor responsible for waste removal and decontamination is GSX Services, Inc. of Laurel, Maryland.
- 6. Waste material will be disposed of by treatment or incineration. Depending upon the disposal method, the distance to the T/S/D facility will be approximately sixty miles for treatment and approximately two hundred miles for incineration.

#### 7. See #5 above.

- 8. Identified waste material is currently being removed from the storage area. Unknown waste has been sampled and is being analyzed to determine it's proper hazard class. The results of the analysis should be complete by December 16, 1985. Within two months after proper classification, the material will be properly packaged and sent off-site for disposal. After removal of all wastes, facility decontamination will commence. As stated above, GSX Services, Inc. is working under a blanket purchase order to remove all waste and decontaminate the facility. Since this area will no longer be used for hazardous waste storage, the sealing of the floor drains and secondary containment will not be required.
- 9. Soil Sampling Plan: A qualified consultant is being retained to assist GAF in preparing and implementing an adequate soil sampling plan for submission to the NJDEP as requested.
- 10. Cost estimates are being compiled by the contractor responsible for the clean-up and decontamination. As soon as these estimations are complete, they will be forwarded to the Department:

Storage of hazardous waste will commence in building 207 on the Linden site once approvals are granted by the New Jersey Department of Environmental Protected (NJDEP). This building is now in the process of being prepared as a storage area. Drains will be permanently plugged and secondary containment will be stored in accordance with all hazardous waste management regulations. Waste material generated will continue to be sent off-site for proper disposal. The disposal methods to be used will be predominately incineration. However, wastewater treatment as well as other forms of treatment will be included. Very small quantities, if any, will be disposed of by landfill. Additionally, a 6,000 gallon capacity storage tank is maintained for storage of "lagoon oil". This waste material is in the process of being classified by the NJDEP. Regardless of this classification, the waste is shipped off-site for incineration. Secondary containment is provided around this storage tank.

All drummed hazardous waste will be sent off-site for disposal within 90 days as required. Additionally, the wastes stored in the storage tank is sent off-site every six to eight weeks (well within the 90 day accumulation time).

GAF OWR

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## RAEMO

## NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

то	Dave Potts	
FROM	Bob Blauvelt	DATEInty_201981
SUBJECT _	GAF Closed Landfill and Proposed Demolition Site-L	inden

On July 6, 1981 a meeting was held with representatives of GAF and NJDEP to discuss two things:

- 1. the monitoring and cleanup requirements for the closed landfill at GAF-Linden and,
- 2. the proposed application for a demolition sanitary landfill also on GAF-Linden property.

#### Closed Landfill

This is a rectangular shaped area of approximately 4.6 acreas of uncovered demolition and laboratory wastes. There are also several areas where drums, both exposed and partly buried, have been disposed of.

A drainage ditch, up to 6 feet wide in places, surrounds 3 sides of the site. The fill is graded to facilitate runoff to this ditch. The ditch is filled with a dirty brown liquid and gives off some chemical odors in places. Fluid from this ditch drains to the treatment plant prior to discharge.

At the top of the fill are 4 concrete cased oil sumps 14" in diameter. These sumps are perioditically used to recover oil floating on top of the water table. A visual estimation indicated water at approximately -8 to -10 feet below grade.

## Proposed Site

The proposed site consists of an 8-10 acre area of low lying ground. This area was once a tributary of Piles Creek which borders the site on the north. It has been dammed off at Dupont road and now contains a large volume of standing water.

The city of Linden, in cooperation with GAF, wants to fill this area with demolition wastes over 3-5 year period. It would increase grades at the site approximately 3-5 feet.

Also present on the site are at least 20 drums, discolored soil and surface water, and several leachate seeps. These seem to indicate that this area may have been utilized for disposal of plant wastes at one time.



NVIRONMENTAL PROTECTION

## NEW JERSEY STATE DEPARTMENT

## MEMO

Tony Cavalier, Enforcement Manager, Division of Environmental Quality Katherine McBride through William F. Althoff, BGWM DATE November 9, 1981 SUBJECT GAF Corporation, Linden, Union County

As per your request, a ground water monitoring proposal has been developed for the above-captioned facility.

## BACKGROUND

The area of concern encompasses approximately twenty (20) acres on the westernmost portion of the GAF property. Covering this site are an abandoned, uncapped, chemical landfill, and a partially flooded area which GAF has proposed to fill with demolition debris. It is evident that chemical waste has also been buried in this area.

Four cement standpipes were installed near the southeastern corner of the landfill at some time in the past. The liquid accumulated in these is a thick layer of oily waste, composition unknown. According to GAF personnel, the oil is pumped out occasionally and taken off-site. Depth to water in the standpipes indicates that they penetrate only the landfill material. No perforations are visible on the walls of the pipes. In short, the "wells" are not designed properly

## <del>gaga kangan</del>g pagalah di kalamat di kangangan di kalamat di kangan di kanga HYDROGEOLOGY

The entire facility is construced on fill of variable thickness. Logs of borings to the east ans south indicate this fill to be underlain by tidal marsh, and glacial (till) deposits consisting of layers and lenses of silt, sand and clay. Bedrock occurs about 40 feet below the surface.

Water-bearing zones would be found in the fill and in the more permeable sections of the till material. The Brunswick Formation is used as an aquifer (industrial cooling) to the north and west.

## MONITORING PROGRAM

To effectively monitor water quality both up-and down-gradient of the landfill site, THE PARTY OF THE P seven (7) well locations have been chosen. At three locations double well installations are recommended. These ten (10) wells will be constructed to monitor the most permeable zones above bedrock. Seven wells should be shallow (maximum depth 25 feet) and completed in the fill or the uppermost glacial material. The remaining three should be screened just above the bedrock-overburden interface (maximum depth 45 feet) and sealed to the surface. All drill cuttings and water brought to the surface during drilling should be treated as potentially hazardous material and disposed of accordingly. The well locations and specifications are attached.

Because of the size of this facility, the monitoring wells may not intercept the plume of oily waste beneath the landfill. To delineate this plume, determine its magnitude and direction of flow, monitoring points may be necessary on the landfill itself. This drilling would be difficult and dangerous; therefore, a decision will be made regarding its necessity after the initial wells are installed. At the present time, a sample of the oil present in the standpipes should be collected and

- 24 1/6

analyzed for petroleum hydrocarbons and PCB's.

To determine what parameters should be tested for when water samples are collected from the monitoring wells, one standpipe should be pumped to exchange three (3) to five (5) times the volume of water it contains (or pumped dry) and a sample collected. A priority pollutant scan should then be performed to determine what contaminants are leaching from the landfill.

These recommendations outline the initial monitoring program and may be modified in the future to include additional field work.

## WQM28:pts

cc: Eric Peterson, Region II Enforcement Bob Blauvelt, SWA Ted Metzger, DHM Dave Potts, Bur. Haz. Waste, SWA Jerry Burke, DAG Office

Attachment

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## MEMO

## NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO Barry Frasco and File				
FROM Wolf Skace Through F. Sickels and V. Krisak	DATE	October	11, 1	985
SUBJECT Compliance Inspection at GAF, Linden				

On October 8, 1985 at 1010 hours I returned to GAF and met with Santo Guillerman and Dan Sullivan. Mr. Guillerman coordinated my visit to coincide with a visit by Al Nesheiwat of BHWE, who is reviewing GAF's closure as a TSD. The purpose of my visit was to check on the progress of a drum removal in progress where various violations were cited during a routine RCRA inspection of the facility on October 23, 1984.

We were taken to Building 53 where drums are being stored. The status of the drum removal remains the same. Drums are now organized into rows of knowns and unknowns. The unknown drums (which number at least 200 drums and assorted containers) are unlabeled. Many of the drums are very old and in poor condition. Large holes and no lids were found on both the known and unknown drums. Some of these drums were cut or opened by SCA personnel to facilitate sampling, as was evident by various sampling notations found on their sides. Some appeared never to have been sampled. Two rows of recovery drums, double stacked containing drums with unknowns were seen. No tops were found on any of these recovery drums.

Newly generated drums of off spec material awaiting disposal are now being staged in Building 53. Mr. Guillerman described the material as non-hazardous. GAF is attempting to sell this material as off spec. In addition to the drums, GAF is storing over 200 plastic bags labeled Asbestos. The Asbestos was removed and is being stored in Building 53 pending disposal.

Mr. Guillerman stated that SCA has manifested two loads of approximately 80 drums each since my last visit on Feb. 5, 1985. No SCA personnel were present during our inspection and Mr. Guillerman stated they have not been on site for at least a month. Mr. Guillerman also stated that GAF has contracted with another cleanup company to continue the removal, instead of SCA. The overall condition of building 53 remains the same. Many of the windows and doors are missing, rain water still accumulates on the floor of the drums storage area.

I left the facility at 1045 hours while Messers. Sullivan and Guillerman and Nesheiwat continued their inspection of another part of the facility.

#### Recommendations & Comments:

According to Mr. Guillerman, GAF-Linden has a tendency to drag their feet and has not made this drum removal a priority item. This is evident since cleanup was originally promised to be completed by November 20, 1984. I recommend an AO be sent to GAF demanding the cleanup be completed and all applicable violations be corrected. I also recommended that BHWE withhold granting closure as a TSD until the removal is completed.

FOC22:df cc Al Nesheiwat, BHWE A Hachment

## MEMO

## NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

то	File	DATE — OCT - 9 1985
FROM	Al Nesheiwat 4 Ne	<del>- 001 = 5 130</del> 0
SUBJECT	Site Visit, GAF, Linden, NJ	
	EPA ID NO. NID 002 185 973	•

On Tuesday, October 8, 1985, the writer conducted a site visit at the above referenced facility in order to familiarize myself with hazardous waste activities on site.

Mr. Dan Sullivan and Mr. Santo Guillermain gave me a tour of the following facilities.

- 1. SOI Storage area located in the first floor of Building #53. Approximately 250 drums were stored. Many of the drums are in poor condition, rusted, improperly labeled or unlabeled. There were also visible stains and spills on the concrete floor of building #53. As stated in the 8/7/85 memo, Building 53 also contained numerous plastic bags of asbestos ready for disposal. As of October 8, 1985 the bags were not disposed of and are still stored in building #53.
- 2. The tank storage area contains a diked containment but the tank did not have any measuring device nor did it appear to have automatic level, cutoff or by-pass valve.
  - The classification of the waste in the tank has not yet been determined. Mr. Guillermain think that the waste is not hazardous.
- 3. There was no visible sign of the waste pile that was mentioned in the 8/7/85 memo.

At the end of the site visit Mr. Guillermain stated that GAF is thinking of closing building #53 and constructing another area for drum storage.

EP10/slw

C2

## NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

771	E	J. V.	

M-012

TO ·	File		•		<u></u>
FROM	Jeffrey Colish	W. C.		DATE	9/19/84
		-11			•
SUBJECT	Part B Preapplication	n Meeting and	Site Visit at (	GAF Corporat	ion, Linden,
	N.I. FPA ID NO. N.ID OC				

The RCRA Part A application on record with the USEPA lists a hazardous waste storage in containers activity (SO1) of 56,200 gallons and a hazardous waste storage in tanks activity (SO2) of 16,000 gallons.

On Tuesday, September 18, 1984, Jeffrey Colish and Tom Sherman visited the above referenced facility to have a Part B preapplication meeting and site visit.

The preapplication meeting covered the following items:

- 1. Representatives of the referenced facility asked whether the site plan must be signed and sealed by a P.E. Tom Sherman answered that all drawings in the Part B must be certified by a P.E.
- 2. An explanation of the requirements of N.J.A.C. 7:26-12.2(e)15iii. Tom Sherman explained that this required the company to consider what impact a 100 year flood would have on their ability: (a) to manage hazardous waste; (b) how the integrity of the hazardous waste containment area would be effected; and (c) how the migration of hazardous waste would be minimized.
- 3. During the visit, it was learned that the referenced facility claims it does not store hazardous waste in tanks (SO2) as indicated on their original Part A application, as it maintains that the waste is not hazardous. Tom Sherman explained that the facility should supply a justification in the Part B application for the deletion of the SO2 storage.

After the preapplication meeting, Santo Guillerman, Corporate Environmental Engineer, gave us a tour of the hazardous waste storage in containers area (Building #53). At Building #53 the following was observed:

- 1. The building is used solely to manage hazardous waste stored in drums.
- 2. The area currently holds approximately 200 to 300 drums. The drums contain surfactants, solvents and lab packs.
- 3. It was noted that many of the drums are in poor condition, rusted, improperly labeled, and that there are visible stains and wet spills on the concrete flooring.
- 4. The referenced facility is currently in the process of unpacking the old drums, identifying the contents and repacking the compatible wastes in fresh drums.

EP46/slw

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## **MEMO**

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TOFile		DATE	_ 8/7/85
FROM E. Rutkowski	(e)M		
SUBJECT Site Visit, GAF, Linden, NJ EPA ID NO. NJD 002 185 973			

On Thursday, August 1, 1985, a site inspection and discussion was held from 1300 to 1500 hours. In attendance were:

Santo Guillermain, GAF, Corp., Env. Eng!r. Ernie Kuhlwein, DEP, DWM, BHWE Red Rutkowski, DEP, DWM, BHWE

#### Background

The facility was issued a 4/5/84 call-in Part B request with the Part B, revised Part A, and fee received 10/4/84. Several NOD's have been issued (11-13-84, 2-1-85) with fragmentary and deficient responses received (12-12-84, 1-14-85, 2-28-85, 3-15-85, 3-28-85, 4-5-85, 4-16-85). A January 14, 1985 referral to BFO for enforcement action was made. A penalty payment was received 5-3-85. The facility on 5/2/85 wrote to have the Part A and Part B rescinded with the facility claiming 90 day exemption status for drum storage and non hazardous storage in a tank (6,000 gal.). BHWPC responded to a 5/16/85 class frication request on 6/27/85 that additional testing was required to further define a 19% hydrocarbon content on the tank stored material.

The May 2, 1985 delisting request additionally asked for closure requirements. The site visit was made to determine site specific conditions relative to the closure conditions to be addressed.

## Discussion

The facility was advised of the June 17, 1985 proposal (N.J. Register) relating to 90 day storage permitting exemption for aboveground hazardous waste storage tanks (copy given). The tank's (OCF fiberglass receive) present purpose is to collect the top layer oil skimmings coming from the baffled concrete collection sump (prox. 8' deep) which feeds the waste water treatment system. The influent to the sump is plant liquid waste plus waste diverted around the facility from a series of unlined open drainage ditches. The facility advised that the tank is emptied and can be emptied easily within ninety days.

The facility advised that the drum storage area (1st floor building #53) was in the process of being converted over to ninety day storage operation with a testing protocol going on identifying the drum contents prior to disposition. Some drums can be considered product oriented and diverted to proper alternate storage areas as reported.

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MEMO

#### NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

то	)File			_ DATE	5/24/85					
FROM	Jeffrey Colish	<u> </u>								
SUBJECT	Site Visit at (	GAF Corporation,	Linden,	NJ, E	PA ID	NO.	NJD 002	185	973	

On Tuesday, April 9, 1985, Jeffrey Colish performed a site visit at the above referenced facility in order to clarify several points that have risen during the review of the reference facility's Part B application.

At the referenced facility, I met with Santo Guillermain, Environmental Engineer for GAF Corporation. Mr. Guillermain gave me a tour of the following facilities:

1. S01 storage area - located in Building #53. This building is an old process building, built on concrete pilings, which the referenced facility is now using as a storage and staging area for containerized hazardous wastes. The Part B application indicates that the overhead doors are equipped with a "lip" to prevent spilled material from exiting the building. This was found to be untrue. It was noted during my inspection that there are no provisions for the prevention of waste migration out of Building #53 via the large overhead doors.

In addition, the inspection revealed floor drains in Building #53 which could allow spilled material to exit the SO1 storage area, causing possible soil/water contamination under and around Building #53.

Building #53 currently holds approximately 120 drums (55 gallon and overpack type) which Mr. Guillermain said were the last of the "old" drums which the referenced facility has stored on-site for the past several years. The referenced facility is currently in the process of unpacking the old drums, identifying the contents, and repacking the compatible wastes in suitable containers.

It was noted that many of the drums are in poor condition, rusted, improperly labeled, or unlabeled, and that there are visible stains and spills on the concrete floor of Building #53.

2. <u>Drainage Ditch System</u> - a system of earthen drainage channels throughout the facility is used to collect any surface water run-off, waste water from the chemical processing areas, spilled material, etc. and sends it to the referenced facility's on-site WWTP. The drainage ditch leading from under Building #53 to the major drainage channel was inspected and was found to contain a very dark colored liquid (water?) with an oily sheen. The major drainage channel winds through a marshy, swampy section of the facility site - this area is another location of possible soil contamination.

3. Old Landfill - the referenced facility operated an on-site landfill until the mid-1970's. This landfill appeared to contain mostly building rubble and industrial trash (bricks, concrete, pipes, etc.), although to Guillermain indicated that the landfill was used in the past to dispose of chemical wastes and drummed materials. He said that occasionally a grum appears on the surface of the landfill and facility personnel retrieve it and place it in Building #53 prior to being disposed.

It was noted that the facility's drainage channel system surrounds the land-fill area - any runoff or leachate from the landfill would enter the drainage ditch system.

- 4. Lagoon on the northern end of the facility site there exists a lagoon (approximate size: 300' X 450'). Mr. Guillermain said that this lagoon was caused by rain water run-off and that the referenced facility never discharged chemical wastes into this area.
- 5. Ground water monitoring wells The referenced facility currently maintains several (approximately 10) ground water monitoring wells located around the landfill.
- 6. An additional SO1 Storage area located outside of Building #48. My inspection revealed that the referenced facility was operating another SO1 storage area (in addition to Building #53) on the loading dock of Building #48. This area contained 40 55 gallon drums of hazardous waste (NJHWN U188 phenol). I informed Mr. Guillermain that the Part B application had indicated that only Building #53 was being used for SO1 storage and assistant all containers of hazardous waste should be stored there.
- 7. THF Storage tank located in the process tank farm (tank #097). In this tank the still bottoms from THF production is stored prior to being picked-up by a licensed hazardous waste facility.
- 8. On-site Waste Water Treatment Plant (WWTP) located on the south-east portion of the facility. The WWTP is made up of the following units:
  - a. Oil-water skimmer to remove waste oil floating on top of the waste water stream before the waste water enters the WWTP.
  - b. Lagoon oil storage tank 6,000 gallon fiberglass tank, used to store skimmed waste oil, located on a diked, concrete storage pad. It was noted that the storage pad and dike was oil-stained and the dike contained approximately 2 inches of water. This "lagoon oil" which the facility contends is mostly nonylphenol and fatty acids is manifested to Delaware Container Company, PA and burned in a cement kiln in Pennsylvania.
  - c. Aeration Lagoons 3 large, synthetic membrane -lined aeration lagoons (app. 200' X 300').
  - d. Clarifiers the company operates 3 waste water clarifiers as part of the on-site WWTP.

DATE February 6, 1985

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTIC

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On February 5, 1985 at 1005 hours, Fred Sickels, DWM - BFO - Central, and I met with Charles Bien and Santo Guillermain of GAF. The purpose of our visit was to determine whether conditions, which existed in a July 7, 1981 site inspection of the lagoon area north of the landfill by Ted Metzger still persists.

We started our inspection by looking at the closed landfill south of building 120. Looking across the runoff collection ditch various pieces of decomposing debris consisting of concrete, timbers, and pieces of steel were seen. One broken, rotted drum and one 5 gallon pail were visible. We continued travelling north behind building 120. From this area we were able to view the western border of the lagoon. No drums were visible. We then went to the western border of the lagoon south of building 350. From area we were able to study the eastern border of the lagoon. One do m was observed in this area. Mr. Bien stated that sometimes the wind will blow empty drums from building 120 into this area. The final portion of this site which was examined was the southeast corner of the landfill. We looked at the cover of the landfill and the four (4) concrete oil sump wells, which had been placed in the landfill by GAF. No drums were observed in this area.

As we left the area we discussed with GAF their long terms plans for the Linden site. Charles Bien stated that all processes which are going on in building 46 will be consolidated into building 36. Building 46, 53, and 52 will then be demolished sometime this year. We indicated that because of the snow accumulations in the lagoon and landfill areas, an additional visit may be required to do a more extensive review of these areas. We left the site at 1100 hours.

#### RECOMMENDATIONS AND COMMENTS:

- 1) Conditions which existed during Ted Metzger's site inspection in 1981 have been improved.
- 2) Some old drums exist, a more comprehensive evaluation of the lagoon and landfill be performed after the weather improves.
- 3) The thickness and makeup of the cover should be checked. Much debris is visible possibly indicating a loss of cover which was never replaced or improperly closed.
- 4) Seven monitoring wells are located in the lagoon and landfill areas, and no information is apparently available as to whether they were ever sampled or if any laboratory results exist.

## 7=

## Actual Site Visit

The tank area was surrounded by 1"-2" crushed rock and soil. The skimmer was not in operation however an oily surface layer was viewed on the baffle sump surface. The tank did not appear to have any type of level measuring device, nor did it appear to have automatic level, cutoff, or by-pass appurtenances to prevent accidental overfilling. GAF personnel stated it was inspected on a regular basis by waste water treatment plant operators (about 75 yards distant). There are definite evidence of spillage in the contaminated areas outside the containment area.

The building #53 area was thoroughly reviewed including a walk around the entire periphery. It is a multi storied building (prox. 7 floors) with about 50% of the glass windows broken. Only the first floor was reported as being used. Two operators were at work sampling and repacking a drum. Approximately 200-250 drums appeared in various states of condition, some identified, some not. In addition, there were numerous plastic bags of asbestos (pipe insulation, etc.) ready for disposal. The internal first floor concrete area surface and the drum conditions would be considered fair at best from a housekeeping view point. Waste spills, rain water, etc. can exit this prox. 250' x 90' building through any one of four loading dock areas (in poor condition) or through the approximately 12 open floor drains to the ground under this building which was built in a flood plain area to allow for the first floor to be 13' above sea level. The building runs east-west with the west side having a catch basin with an underground pipe about 75'-80' leading to an open drainage ditch. All waters from this area go to the waste water treatment operation through a series of unlined ditches. Free standing water could be seen in all ditches viewed (little to no flow). While walking around the outer wall of the building and viewing the soil under the building, free standing discolored water was evident around the periphery (greenish color).

As an additional point, a waste pile (of fairly recent orgin) was noted to the east of building 47 and slightly south of the power house (building 13). The newness was evident as their was fresh plastic film on the outer edges (begm) with oily soil contaminated residue contained in the center along with several bales of absorbent hay. It was about 30' x 15' x 4' high. The GAF personnel present could not offer its origin or status however it appeared to have been a hurriedly constructed spill response endeavor. Underlying this area was soil.

## Conclusions

- 1) GAF was advised that they would have to prepare for approval a closure plan for the SO1 area which would have to incorporate a soil surface analysis around the building. DWR has monitoring well programs underway at the site.
- 2) GAF would have to provide supporting data that they are a ninety day generator which was evident they were not during the site visit.
- 3) The question of ninety day tank storage delisting was indicated to GAF as being applicable in the future however, if hazardous, GAF would have to submit a closure for the SO2 including soil sampling around the tank perimeter in the interim unless the Department would defer status pending the regulation becoming effective.



4) GAF would determine the origin and status of the waste pile and advise.

A letter is being drafted addressing the concluding items.

Epic 8/1/85

EP5/slw

c: F. Coolick E. Kuhlwein

## MENG

<b>1</b> .0	Abandon Site Pil	
s sout	Ted Metgas: ///	DATE
SUBJECT	Site inspection, CAL Co	erporation, Couth Wood Street, Linden, M.

On Tuesday, July 7, 1981 at 0900 hrs., Ted Metzger and Ed Putnam of DHM, met with Dave Potts (SWA) and Bob Blauvelt reologist Ground Water Management for a pre-arranged increation at GAF. The purpose of the inspection was to investigate an ancient Landfill on the property, and to inspect an area GAF wants to use to fall with demolition debris from the City of Linden. The investigation party met with Mr. Waldo Machado, Plant Manager, and Mr. Inzirrillo, Invironmental Engineer. They also guided us on a foot inspection of the Landfill sites and the plant grounds.

## Site History: Ancient Landfill

The old Landfill is approximately 12 acres in size. It was used by GAP for disposal of chemical wastes from 1964 to 1971. From approximately 1941 to 1964, the U.S. Government operated the site. The Government acquired the site sometime during the beginning of World War II. Prior to this period the facility was a German film and analyne manufacturer. It is possible that chemical waste was disposed on site by both the U.S. Government, and the German Manufacturer. The hature of these wastes may be similar to those presently denorated at GAF. Attached is a map showing location of dump site, location of proposed demolition debris site, and adjacent manufacturers. Wastes generated from GAF may include the following:

Benzene
Dichlorobenzene
Dioxane
Ethylene dichloride
Phenol
Propylene oxide
Silver

Other materials stored on site in drums and standing tanks include:

Toluene
Corrosives and flammables
Methanol
Dinitrochlorobonnol
"TMOA" Still bottoms.
Nonane

Many of the above materials are stored in drums at various locations throughout the plant grounds. These drums were in very poor condition rusted through, leaking on the ground.

GAF Corporation July 14, 198

All of the drums were starped with the anti-location of the mean after the RCRA became effective. These crums was an top-action the elements and their was no protection proved enclosed from the surface and groundwater. It appears apparent to this investigator that GAF Corporation is not making a corporations effort to expeditiously distinguished this arthreed, making a safe and or quit manner.

The surface of the landfill is severely it itsed and senttern with old rusty drums and lit rally thousands of well lab jarr containing various materials. Alter the cost side of the Lordfill is a ditch coptaining water. Along, and in this ditch, are several hundred drums, all in a severe and corred a condition. If these drum contained material at one time, they have since leaked all of their contents. Also along the entire perimeter of the landfill, drums can be seen protruding from the ground. Mr. Waldo Machado informed us that GAF actively used the Landfill from 1964 to approximately 1971 to dispose of industrial waste, including chemical waste. Drums observed on the landfill were dated 1950, 1776, and 1976. The water in the ditch is part of a surface runot; and insumprial discharge collection system that supposedly enters GULT's Waste Water Treatment Plant. The water is treated and discharged into the Arthur Kill. GAF has a NIDES permit for the Treatmontering lity (#1.J0000019), however, its network of collection streams are unlined, and the water in-the system is fed by all areas of the plant by sump pumps. The water in these ditches appears heavily contain ted in areas. The EPA monitors the treatment offluent only where it discharges into the Arther Kill...

Our purpose then inspected the area adjacent to the old landfill that GAF is seeking a permit from SWA to backfill with demolition debris from the City of Linden. This site is about 10 acres in size, and is low lying and covered with water. This area was once fed by Piles Creek which is to the east of the site. The creek has been dyked and does not enter the area any longer. The eastern portion of this proposed site appears to have been partially backfilled, and 55 gallon drums containing material can be observed protruding from the bank along the entire eastern edge. Drums could also be observed on the western edge, and scattered about in the pond. Mr. Machado informed me that GAF did not dispose of any drums in this area.

#### Recommendations

ก็สู้สึงสมาชาสาร

Old Landfill: This site appears to contain a large quantity of chemical waste both in drums and bulk form. On site are three large cement standpipes installed to groundwater. In each of these pipes is a large layer of oil (thick) on the surface. This appears to indicate severe groundwater contamination. To support this assumption, is the evidence of rusted surface drums, and large quantities of lab jars. The history of the site indicates unrestrict waste disposal practices. Initially, we should request that GAF install monitoring wells in an effort to determine the extent of groundwater contamination and severity. Further, research may be necessary to determine what was manufacturered when the U.S. Government operated the facility, and what was generated when the facility was operated under the German concern.

Dz 9

GAF Corporation July 14, 1981

Proposed Landfill Site: Due to the disconnected constituted drums in this area also, I week we should have the area monitored also to determine if a serious problem exists become GM is granted a permit to fill this area.

Surface Water Collection Ditchas: Although AF has an appeared Wastewater Treatment Flant, the ditchas a correspond that relief the facility and surface water are not line considered by a surface chemical before it enters the treatment of liny. The water in these ditches should be compled along the colliment and the consideration of the same if linears are no energy.

Pacility Drum Storage: GAF has a RdFA or many permit however, the drums are not stored in a safe manner. They are open to the elements leakage is not-contained, the drums are being stored for long periods of time. I suggested to Mr. Machado that he clean these areas and store drums in a more secure way. I also suggested that he should dispose of some of these drums, rather than store them for long periods of time. Perhaps Hazardous Waste should re-inspect the facility. I will contact them regarding this matter.

TM:sm

**一种工作的** 

STATE DEPARTMENT OF EL V JERSEY Central Files Missell. MENTAL PROTECTION

1		
	-	

CUB ISCT	GAF - Linden			~ <u>* * * </u>	
FROM	Walter Olenick	 	DATE	1/13/82	
то	Scott Santora	 			

As we discussed, I am submitting data regarding toxic contamination at the subject company site with a brief discussion outlining the contaminants which were discharged.

The Special Sewer area highlighted in red was used for the discharge of arsenic acid residues from Building #46. The line went overhead approximately 300' over a trestle over the railroad tracks and was discharged in the low lying marsh area. This overflowed to the other red highlighted area to the west. The westerly area was inundated by the tidal slow flowing Piles Creek and toxic materials flowed back and forth with the tides (a sort of reflux action).

Arsenic acid residues result from the amination (using aminonia) of sulfonated anthraquinones in the presence of arsenic acid under pressure in an autoclave. On completion of the amination, pressure is reduced by blowing off unreacted ammonia (which is condensed and recycled to subsequent batches), followed by dilution with water and filtration of the product. Spent arsenic acid in the filtrate were discharged via the Special Sewer line to the Special Sewer Area.

If process details of this reaction procedure are required, this can be made available from U.S. Government Printing Office documentation obtained in post World War II process studies conducted by several teams at the I.G. Farben plants in Germany. GAF formerly was owned by I.G. Farben.

In addition to arsenic wastes, iron sludges were also directed to the Special Sewer Area via the Special Sewer Line.

- 2. Among products manufactured in Building #49, were the alpha sulfonated anthraquinones. See report of December 21, 1970 for details regarding this operation.
  - Discharge of acidic solutions was by means of sewer lines which discharged beneath the building. The building was constructed on pilings over an area filled with cinders from their coal burning facilities. Included in this waste discharge, was the diluted surfuric acid residues from the alpha sulfonated anthraquinones, which contained mercuric sulfate and traces of entrained metallic mercury. The acidic solutions drained through the cinder fill and was discharged via drainage ditch to Tract #9. It is estimated conservatively that over 2.5 million pounds of mercury and mercury compounds were discharged to ultimately become incorporated in sludges in the Arthur Kill. Building #49 has since been demolished.
- During an inspection period in 1970, drums of highly chlorinated hydrocarbon compounds from still residues were buried in the green highlighted area of the plot plan. The residues were from the manufacture of pre-emergence herbicides.
- I am enclosing a copy of documentation regarding mercury pollution dated December 21, 1970. Although it had been forwarded to the Water Resources group on January 11, 1971. (See memo of H. Wortreich and later to Marty Sanvito on December 12, 1976, and even more recently copies went to Water Resources in 1979 - no action appears to have been taken.

Is it possible to obtain mining rights?

falle Plinch

Walter Olenick Supervisor



#### Mr. Shotwell

Mr. Olenick

Mercury Pollution of Waterways

It is commonly known that the manufacture of chlorine and caustic soda employs the use of mercury in electrolytic cells. Losses of mercury from these operations have been the subject of legal actions directed toward minimizing these losses.

In the manufacture of dyestuffs, and importicular those dyestuffs which involve anthraquinone types, amendal tional source of mercury pollution of waterways is earsee through the uses of mercury, mercuric oxide or mercuries altate in sulfomation of anthraquinone. Mercury is used in the sulfonation and disulfonation of anthraquinone in order to direct the sulfonic acid group to the alpha position. The amount of mercury required for the sulfonation is approximately 1% of the anthraquinous being sulfonated.

Preparation of the alpha sulfonated argumentationes is technically of great importance since the sulfonic acid group is readily replaced by hydroxyl, chlorine and amino groups. Of greatest importance among the sulfonated authoraquinones, is the manufacture of 1-Anthraquinone sulfonic acid (Industrially known as Diamond Salt), which is the intermediate from which a wide range of anthraquinone vat dyes is prepared.

Of equal importance is the preparation of 1,5-Anthraquinone disulfonic acid which is derived through the disulfonation of anthraquinone by the use of mercury in the same manner as above. The preparation of the 1,5 compound results in the formation of a by product 1,8 anthraquinone disulfonic acid for which there is only limited use. The 1,8 common is thus offered for sale by a manufacturer that requires his entire production of the 1,5 for captive use.

distributed by ranging into later) and isolated by selective precipitation by the addition of solider chloride, notassium chloride, or thrown partial neutralization with associa to produce the corresponding sales of antermainede. The resultant salt is received by illitration and mashine, filtrate and mashes containing mercury salts is listarded to a samicipal somer or a nearby waterway.

There are only a few New Jersey manufacturers which list\* the alpha sulfonated anthraquinones for sale, since most manufacture is intended for captive use. The following information is supplied as a partial guide for some known manufacturers:

Drug Reporter-Buyers Directory Issue)

- A. 1. Anthraquinone Sulfonic acid, sodium, potassium or ammonium salts (Diamond Salt)
- 1. E.I. DuPont de Nemours and Company, Inc. Dyes and Chemicals Division Deepwater Plant

This item is listed for sale by this company. Manufacture most likely takes place at the Deepwater plant in the Southern District and should be investigated during the pending investigation scheduled for January.

2. Verona Corporation
Plant #2
Bayonne

This item is manufactured for captive suse primarily. It is also listed as a sales item. Operations involving sulfonations were said to be planned for phasing out at this location with transfer of operations to South Carolina. No date for transfer has been set. When this occurs sit should be a matter for federal follow up.

3. GAF Corporation Linden

This item has been manufactured for captive use in the Building 49 area. Currently, operations involving sufficient have been curtailed and will be transferred to the Building 46 area. Production is expected to be resumed within the next two months.

4. Otto B. May, Inc. Newark

The item is currently manufactured for captive use. Effluent is directed to the sewer.

- B: 1,5 Anthraquiaone disulfonic acid, dipotassium or disodium salts
- L. L. DuPont de laccours & Co., Inc. byes and Chemicals Division

The compound is listed as a Sales item and is probably manufactured at the apopulater facilities.

2. GAF Corporation Linden

The compound is manufactured for captive use. See comments under paragraph (A) above.

- C. 1,8-Anthraquinone disulfonic acid, dipotassium or disodium salt
- E.I. DuPont de Nemours & Co., Inc. Dyes and Chemicals Division

The compound is listed as a sales item, and is probably manufactured at the Deepwater facilities. The compound is a by-product of the manufacture of the 1,5 compound

GAF Corporation Linden .

The compound is listed as a sales item. It is a by-product of the manufacture of the 1,5 compound.

Discussion:

The above listed manufacturers are not considered to be a complete listing of New Jersey manufacturers. Other vat dye manufacturers atilizing these intermediate compounds shave the capability and know how for their manufacture and may corresply be producing these materials for captive use. There is no attempt being made to recover mercury from these processes. Discharge of mercury compounds from these processes can well exceed the level of losses which have been indicated in operations involving chlorine caustic plants.

PECON BLALATIONS:

Refer to the Bureau of Water Pollution Control for further investigation.

> Clenick Principal Ind. Hyg.

#### ATTACHMENT

#### Areas of Concern:

- GAF is an active manufacturing facility adjacent to the turnpike in Linden, N.J. There is an ancient landfill on the property that com prises 12 acres. GAF used this site for disposal of chemical waste, as did the Government when they controlled the facility from 1941 to 1961. Standpipes on the site suggest severe groundwater problems.
- Although GAF has a wastewater treatment system, the property has a network of unlined ditches and ponds which are said to lead to the wastewater treatment plant. The water collected in these ditches is the runoff from the plant property and from sumps inside the process buildings, and may contain a wide variety of contaminants.
- A 1981 site visit by Ted Metzger (memo from T. Metzger to Abandoned Site File, 7/14/81) reported that the lagoon area north of the landfill is "10 acres in size, and is low lying and covered with water. The eastern portion... of this site appears to have been partially backfilled, and 55 gallon drums containing materials can be observed protruding from the bank along the entire eastern edge. Drums could also be observed on the western edge, and scattered about in the pond." To date, there is no record of any further investigation into this area of the site.
- GAF was included in the 1983 Phase I Dioxin Program. Six samples and one blank were taken. Of the six, two areas were found inconclusive due to background interference. No sampling has been performed since the initial sampling, and the presence or absence of dioxin at GAF remains questionable.

23 Sept 1985



Corporate Environmental Engineering Department



Feb**nuar** 19. 1982

Mr. Eric Peterson
State of New Jersey
Department of Environmental Protection
Region II
Division of Water Resources
Enforcement and Regulatory Services Element
P. O. Box CN 029
Trenton, New Jersey 08625

Dear Mr. Peterson:

In response to your request of December 3, 1981 and in confirmation of GAF's presentation to representatives of the New Jersey Department of Environmental Protection on January 20, 1982, the requested data is being provided.

The depth of each of the four standpipes is nine feet, eleven feet and ten inches, seven feet and eleven inches, seven feet and three inches for number one through four respectively.

The standpipes were installed during 1975 at the request of Mr. Edward J. Faille, Sr. of the New Jersey Department of Environmental Protection.

The standpipes are made of concrete and it is believed that the lower portion is perforated. Each standpipe is 14 inches in diameter and capped.

The thickness of the dark liquid in the wells is estimated to be about onequarter to one-half inch layer floating on the lower water layer. The water levels were approximately 4, 5 and 3 feet for standpipes numbers one through three, respectively. Water was the only material in the number four well.

Results of analyses of the water in each standpipe:

Dq.

# STANDPIPES

J.		#1	#2	#3	Li A
871		PPM	PPM	PPM	#4 PP M
, ح	Ammonia	< 0.1	<0.1	< 0.1	<0.1
3,5	Phenols	100	_40	[180]	150
.05	Arsenic	$\overline{\left(0.1\right)}$	0.2	<0.02	$\sim$
	- Chlorinated		the second	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<0.02
, 0.5	Hydrocarbons	<1	48	231	291
•	Chromium	<0.01	<0.01	<0.01	<0.01
1.0	Copper	0.03	0.03	0.03	0.03
_	-Surfactants	11.2	3.7	8.2	8.0
,05	Silver	< 0.01	<0.01	<0.01	<0.01
,	-TOC	558	312	392	358.
3 bld	Mercury (ppb)	1.6	3.0	20	6.4
					<b>0.</b> <del>±</del>

Alkyl phenol appears to be the major constituent of the dark liquid layer. A sulfide odor was present in the water in the standpipe with no alkyl phenol layer, number 4.

Should you have any additional questions, kindly telephone Frank Inzerillo at (201) 628-3504.

Very truly yours,

GAF CORPORATION

F. Inzerillo

cc: Waldo E. Machado Charles F. Bien Anthony J. Cavalier

D10:

## Lagoon 011 Generating Process

"Lagoon Oil" is comprised of approximately 19% free fatty acids, 70% nonyl phenol and 11% water. The waste material is generated from the manufacture of surfactants. Batch reactors are rinsed out and the resultant rinse water contains this mixture. The material is transported via a ditch system toward the on-site wastewater treatment plant. Before entering the treatment the "lagoon oil" is skimmed from the surface of the influent by a continuous belt separator and is accumulated in a storage tank within a diked area. Once a sufficient volume of waste accumulates the material is transferred from the tank to a tank truck and transported to an off-site disposal facility for incineration.



#### CERTIFIED MAIL # P33 0516818

February 28, 1985



Mr. Frank Coolick
New Jersey Department of
Environmental Protection
Bureau of Hazardous Waste Engineering
32 East Hanover Street - CN 028
Trenton, New Jersey 08625

Ref: GAF Corporation, Linden NJD002185973

Dear Mr. Coolick:

In response to your letter of February 1, 1985 concerning the Part B Application submittal for our Linden facility, the following is offered:

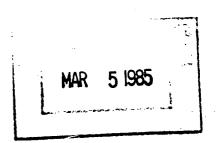
1) The waste material "Lagoon Oil" is a mixture of nonylphenol and fatty acids and, therefore, does not meet any of the classifications of waste oil listed in NJAC 7:26 + 8:13.

The term "Lagoon Oil" is an antiquated term, which has been used in the plant for a number of years, with no apparent origin. This waste material is not generated in a surface impoundment or lagoon.

2) Tetrahydrofuran (THF) is manufactured at this plant location. As a result of the manufacture of this product, a residue accumulates in the process reactors where the material is synthesized. After a sufficient quantity of the residue accumulates, it is removed from the process unit and is sent off-site for disposal to a licensed and permitted T/S/D facility. Also, as a further result of the distillation of this material, a residue is accumulated in the distillation process unit. Again, once sufficient quantities of the residue accumulate, it is sent off-site for proper disposal.

Pursuant to NJAC 7:26 - 8.2(b) - "a hazardous waste generated in a product or raw material storage tank...or in a manufacturing process unit, is not subject to regulation...until it exits the unit in which it is generated...". Upon ceasing manufacturing operation in the units described above, the waste material is removed and is sent offsite within approximately seven (7) days. Waste material is transferred directly from the process units to tank wagons which transport the material to the disposal facility.

- 3) Contingency Plan Attached with the required addition.
- 4) The contingency plan has been submitted to the local hospital and first aid squad and the local emergency response team.
- 5) Internal alarms and emergency communication equipment are located throughout the facility. All personnel have access to these systems in the event of an emergency.



February 28, 1985

Page 2

Mr. Frank Coolick
N.J. DEP
Trenton, New Jersey

- 6) Training Program Outline Additional material is being assembled to support the training program and will be submitted by March 15, 1985.
- 7) Facility Map A more detailed map is being prepared and will be submitted by March 15, 1985. Land use surrounding the facility is limited to industrial.
- 8) (a) The area near the entrance to Building 53 is sloped, which will prevent any material from exiting the building as a result of a spill or leak.
  - (b) The floor drains in Building 53 will be blocked to prevent any material from exiting the building through these drains.
  - (c) The base underlying the containers of waste material is made of concrete. Containers are stored on pallets which would prevent these containers from coming in contact with any accumulated liquids. The area has the capability of containing 100% of the volume of the stored waste material in the event of a spill or leak. Accumulated precipitation is removed from the area as is necessary.

Please note that the storage area will be used for <u>short term</u> storage and staging of waste materials prior to shipment off-site for disposal.

If you have any questions, please call.

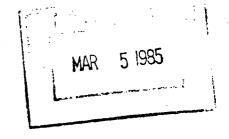
Very truly yours,

GAF CORPORATION

Santo Guillermain

cc: D. Sullivan
GAF Corporation

SG/hb



11.	FACILITY 1	EPA ID #	NJD002	185973				
12.	GENERATOR	NAME	GAF Co	rporatio	)I1			
13.	GENERATOR	ADDRESS		South				
14.	GENERATOR	EPA ID #	NJD002	185973	*****	********	**********	
15.	WASTE IDE	NTIFICATIO	ON					
W	JDEP HAZARI ASTE NUMBEI	R	AMOUNT OF WASTE		0	F WASTE	e) HANDLING METHOD	
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	001	134	673 1580)		Liqui			Y
D	002		589 (898)	<b>G</b> .	Waste Liqui	Corrosiv	e S01	Y
	002		330 380)	G		Corrosiv	e S01	<b>Y</b>
D	003		1	P		Picric (wet)		. <b>Y</b>
Ü	013	13:	200			Asbestos		Y
Х	387	67	243	P	Waste	Poly-	S01	Y
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D	011	2	000			Solid NO	S S01	Y
P	oison B	_	110 <sub>~[,</sub>	P	Waste	Poison B	S01	Y
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### AL HAZARDOUS WASTE SITE PO 4 SITE INSPECTION REPORT

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SITE NUMBER (10 be essign ed by Ha

GENERAL INSTRUCTIONS: Complete Sections 1 and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (Section II). File this form in its entirety in the regional Hezardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Tack Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION						
D CTREET (or other identifier)						
GAF Corpo	ration	footof	South	Wood Street		
C. CITY.		D. SYATE	07036	CWION		
G. SITE OPERATOR INFORMATION		1 , , , ,	0.000			
1. NAME				2. TELEPHONE NUMBER		
_ GAF_Cor	PORQ TION_	<del></del>		201.628-350	7 1	
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3. city		<del></del>		4. STATE 8. 21P CODE	•	
I, SITE DESCRIPTION				1	Δ,	
A boardows	1- Hazardous	West	e land f	ill + Manfactur	ing YI	
J. TYPE OF OWNERSHIP				· ·		
1. FEDERAL 2. STATE	E 3. COUNTY	4. MUNICIPAL	S. PRIVA	16		
	II. TENTATIVE DISPOSITIO	N'fcomplete If	ile section lest)	V		
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DISPOSITION (mos, day, & yrs).	1. HIGH	2. MEDIUM	SI LOW	4. HONE		
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	III. INSPECTIO	N INFORMATI	ON	•		
A. PRINCIPAL INSPECTOR INFORMA	· _	2. TITLE				
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3. ORGANIZATION					_	
NJOEP DWG	of WOST MGT	·		689-292-556	s C/	
B. INSPECTION PARTICIPANTS	2. 096	ANIZATION		3. TELEPHONE NO.		
1 NAME						
Ed Putnam	Piu. Waste	Mat.		609-292-55	60	
		<i>.</i>				
				<del>                                     </del>	<del></del>	
C. SITE REPRESENTATIVES INTER	I VIEWED (corporate officiale, wo	korn, res lecita)				
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Frank Inzerilb	201-628-35	504	Wayne	GAF	<del></del>	
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Continued From Page 4	
VIII. HAZARD DESCRIPTION (continue	od)
B. HON-WORKER INJURY/EXPOSURE	
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C. WORKER INJURY/EXPOSURE	•
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D. CONTAMINATION OF WATER SUPPLY	
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E. CONTAMINATION OF FOOD CHAIN	
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In the first state	
F. CONTAMINATION OF GROUND WATER	^ ^
Shalkow Scoundwater 15	obviously affected
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pull extent of Contamination to 4	1
Division of Water Recourses 15 F	Presently designing
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IN CONTUNCTION W/GAF Groun	of modified monitoring in
C CONTAMINATION OF CURRENCE WAYER	
G. CONTAMINATION OF SURFACE WATER	
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May Be some effect from	surtace runoff to
Piles Creck	·
	$E_{IJ}$

D 18

S. INCOMPATIBLE WASTES

NOT established but Suspected.

<u> </u>		VIII HAZARD DES	CRIPTION (continued)		
T. MIDNIGHT DUMPING					
NON SI	ECI	FIC UNCO	uticited di	s posatol u	usres
by GAF		A Pro	. 41	1 . 0	. 1.
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	1X.	POPULATION DIREC	TLY AFFECTED BY S		
A. LOCATION OF POPULATION		APPROX. NO.	C. APPROX. NO. OF PEC AFFECTED WITHIN UNIT AREA	OPLE D. APPROX. NO. OF BUILDINGS AFFECTED	TO SITE (apacily units)
					(epecily Line)
I. IN RESIDENTIAL AREAS	1				
2. IN COMMERCIAL OR INDUSTRIAL AREAS		500	500	50	100'
IN PUBLICLY		• • •		30	100
TRAVELLED AREAS	Re	stricted			
PUBLIC USE AREAS (parks, schools, bic.)		A/W	~ N/A	N/x	NIA
		X. WATER AN	HYDROLOGICAL DA	/ •	<u>'</u>
A. DEPTH TO GROUNDWATER(epocity unit)		B. DIRECTION OF FLOW		C. GROUNDWATER USE IN VICINITY	
D. POTENTIAL YIELD OF AQUIFER E. DISTANCE TO DRINKING WATER SUPPLY F. DIRECTION TO DRINKING WATER S				G WATER SUPPLY	
-		(epecify unit of mea	sure)		
G. TYPE OF DRINKING WATER SUPI		INITY (epecify form)			
<15 CONNECTIONS	> 15 C	INITY (apacily town): ONNECTIONS —		* **** · · · · · · · · · · · · · · · ·	
	4. WELL				
PA Form T2070-3 (10-79)		PAGE	8 OF 10	Contin	ue On Page 9

Dia



# consultants in environmental management

December 18, 1985

GAF Corporation 1361 Alps Road Wayne, NJ 07470

Mr. Anthony J. ten Braak ATTN:

Director, Environmental Engineering Department

NJPDES Permit Compliance Plan RE:

Linden, New Jersey Plant

#### Gentlemen:

The accompanying document presents supplemental information and a recommended compliance plan for the draft NJPDES permits issued to GAF Corporation's Linden, New Jersey plant. The two key issues addressed in the document are:

- Investigations and remedial measures to reduce mysid shrimp toxicity in the plant's wastewater treatment facility effluent, and
- Investigations and remedial measures : ated to groundwaters under the plant site.

AWARE projects a coordinated, five-phase program to address and resolve, as necessary, these two issues. Phase I has been the initial interface with GAF Corporation and preparation of the accompanying document. The subsequent phases, as described fully in the document, are the following:

Phase II - Preliminary Data Collection and Investigations

Phase III - Remedial Investigations and Feasibility Study

Phase IV - Engineering Design

Remedial Program Implementation Phase V -

Attachmen

Mr. Anthony J. ten Braak Page 2 December 18, 1985

The overall time frame for Phases II through V is anticipated to be 40 to 52 months. Projections of time requirements are extremely speculative at this very preliminary stage—before any data upon which to base judgments are available. AWARE is confident in our projection of 16 months in which to perform the necessary investigations and to define a coordinated, perform the necessary investigations and to define a coordinated, perfective resolution of both the effluent toxicity reduction and the groundwater management issues.

Projections of schedules and resources for the subsequent engineering and implementation phases are especially speculative. Engineering and implementation are totally contingent on the extent and complexity of the measures recommended on the basis of the investigation results. Based on GAF corporation's internal guideleines and AWARE's experience in such efforts, we corporation's internal guideleines and AWARE's experience in such efforts, we have reflected a 23- to 35-month overall engineering design/implementation schedule. Major components of this schedule are 8 months for major engineering design and appropriations request preparations, 1 month for NJDEP engineering design and appropriations request approval by GAF's review and approval, 2 months for appropriations request approval by GAF's

AWARE looks forward to working with GAF Corporation in undertaking the effluent toxicity reduction and groundwater assessment management programs.

Sincerely,

AWARE Incorporated

Pobert n. Mutch In

Robert D. Mutch, Jr., P.HG., P. É.

Group Vice President

Perry W. Lankford, P. E. Group Vice President

/cs Enclosures

Er

A limited hydrogeological investigation of the site was conducted in early 1983. This investigation consisted of the construction of seven shallow wells four of which were screened in the upper fill materials. Sampling and analysis of these wells revealed concentrations of benzene, halogenated benzene compounds, napthalene, phenol, arsenic and cyanide. The drilling also revealed that the site is underlain by a shallow layer of relatively permeable fill materials which overlies recent tidal marsh deposits consisting of peat and clay. The tidal marsh deposits are in turn underlain by a relatively low permeability glacial till and ultimately the shales and siltstones of the Brunswick formation.

The Linden plant currently faces two significant environmental issues which are the subject of this document. The first issue deals with mysid shrimp toxicity of the wastewater treatment plant effluent. In 1984, bioassays using mysid shrimp became a part of the NJDEP's permitting program for the effluents to marine receiving waters from all industrial and municipal wastewater treatment facilities in the state. The NJDEP program requires staged increases in mysid shrimp  $LC_{50}$  values up to a target 50 percent  $LC_{50}$ . The Linden wastewater treatment facility (WWTF) effluent  $LC_{50}$  has been found in limited testing to be approximately 3.5 percent or less. Discussions are ongoing between GAF and the NJDEP on the implementation and compliance schedule leading ultimately to an effluent  $LC_{50}$  of 50 percent. As a part of the compliance plan, interim toxicity limits will be established at milestone dates leading to the final 50 percent  $LC_{50}$  level. In addition, until the 50 percent  $LC_{50}$  requirement is attained, the plant faces dramatically increased effluent discharge

fees associated with the currently low  $LC_{50}$  values. Besides the bioassay limitation, the draft permit contains more stringent effluent limitations including a requirement of at least 85 percent BOD removal in the WWTF and a requirement of developing a Best Management Practices (BMP) Plan. A final permit defining an Effective Date of Permit (EDP) can be expected within the year.

The second issue centers on the observed groundwater contamination in the surficial water bearing zone and the aforementioned source areas to which the groundwater problem can be attributed. A draft NJPDES Discharge to Groundwater (DGW) permit was issued to the Linden plant on September 16, 1985. That draft permit sets forth a comprehensive list of requirements including construction of 11 more monitoring wells, a sludge sampling program, quarterly sampling of all existing and new monitoring wells for a comprehensive list of groundwater parameters, plans and specifications of the wastewater conveyance system, and installation of flow meters on all process discharges.

Although it is the practice of the NJDEP to issue and maintain separate permit components and requirements for surface water and ground-water discharges, the particular nature of the Linden site demands that these two programs be conducted in coordination with one another. The site's wastewater treatment facility (WWTF) currently treats a substantial portion of the groundwater discharged from the site. The existing system of unlined wastewater ditches serves as a significant groundwater discharge point on the site. The discharge of groundwater to the unlined ditches and ultimately to the WWTF appears to be a significant component of

the plant's effluent toxicity. Consequently, the activities of these two programs require careful and close coordination. As laid out in Figures 1-1 and 1-2, it is GAF's intent to undertake a coordinated and phased approach to the groundwater assessment and management program and the effluent toxicity reduction program.

The investigative and implementation approaches schematically illustrated in Figures 1-1 and 1-2, respectively, include time lines representing an ambitious schedule. The project has been described in phases according to a logical progression of technical and economic decisions as follows:

Phase I - Preparation of this Plan and thus not described herein.

Phase II DGW - Permit Requirement Implementation

DSW - Preliminary Investigations/Problem Definition

- BMP Plan Development

Phase III DGW - Remedial Investigations/Feasibility Study

DSW - Source and End-of-Pipe, Bench-Scale and Pilot
Scale Investigations

Phase IV Engineering Design

Phase V Remedial Program Implementation

Descriptions of the work effort and schedules involved in each area of the program in as much detail as can be defined currently are provided in the form of attachments, as follows:

Attachment 1 - Effluent Toxicity Reduction Work Plan

Attachment 2 - Best Management Practices Work Plan